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Sunflower Silage For Sheep

The Value and Right Use of Sunflower Silage in Wintering Ewes—Making the Crop on Dry and Irrigated Land

The cost of wintering range ewes is the weakest point in the wool grower's business in average seasons. War-time prices for hay may not come again, but costs will naturally stand in about the same relation to low lamb values as to the higher figures. Cheaper hay does not remove the necessity of devising means of keeping down winter expense and at the same time keeping up the condition of the ewes.

Hard winters are sure to come. With decreasing areas of lands available for winter range, sheep-owners farther north are being compelled to resort to feeding even in mild winters. In much of Montana and Idaho territory the good range feed was deep under snow in November last winter. In these sections it looks like a permanent proposition for winter feeding and the questions of the best and cheapest for the condition are uppermost in the minds of progressive sheepmen. That sunflowers thrive where dry farming fails is shown by the thrifty plants around settlers' door-yards in drouth seasons that make grain growing a total failure. This crop has no value except as a feed for stock and the silo offers the only means of storing it in condition for satisfactory feeding.

The reports printed below summarize the work done along this line by the Montana Experiment Station and the U. S. Sheep Experiment Station. The results and suggestions reported should carefully be observed by stockmen who are desirous of producing some of their own winter feed on their range land.

MONTANA METHODS AND RESULTS

By Dr. W. E. Joseph.

The rather wide interest in sun-

flower silage in the Western mountain country made it seem advisable to undertake some work on its value for feeding breeding ewes. The first work of this kind was undertaken by the Montana Experiment Station in the winter of 1917-18. Registered ewes averaging 170 to 175 pounds during the test required 3.9 pounds of hay per head daily for about 2.5 months and about 0.5 pounds per head daily of oats for the last 20 days to keep them in good condition for lambing. Another lot was fed 3.0 pounds of hay, 2.2 pounds of sunflower silage and a trifle less oats to produce practically the same results. There was no difference in the strength and birth weight of the lambs, strength and condition of the wool nor in the condition of the ewes fed according to the two methods. Silage was also fed after lambing with no unfavorable effect on the milk or the growth or health of the lambs. In this test it took practically 2.5 pounds of sunflower silage to replace a pound of hay. These results were published in the National Wool Grower for May, 1919.

Amount of Silage to Feed

In 1919-20, a second trial of sunflower silage for breeding ewes was carried out. The following table gives some of the essential results:

TABLE I. SUNFLOWER SILAGE FOR BREEDING EWES.
Length of Feeding Period, 61 Days.

Ration	I Alfalfa Hay	II. Alfalfa Hay and Light Silage	III. Alfalfa and Heavy Feed Silage
Length of feeding trial—62 days	62	62	62
Number of ewes—			
Rambouilletts—	12	12	—
Crossbreds—	2	2	—
Shropshires—	—	—	8
Av. weight of ewes during test, lbs.	158	156	138
Av. gain per ewe during test, lbs.	21	15	17
Average daily ration—			
Alfalfa hay, lbs.	4.0	3.0	1.6
Sunflower silage	—	2.6	4.2



Dry land sunflowers raised at an elevation of 5,700 feet in 1920.

to depend on the hay and silage entirely.

The 2.6 pounds of silage were not equal to the one pound of hay as the lot fed hay gained six pounds more per head in the two months. According to these results 2.75 to 3.0 pounds of sunflower silage would be required to replace a pound of hay.

We feel assured that a small amount of silage can be used with good results in rations for breeding ewes.

There has been a rather general notion that a heavy feed of silage would be objectionable owing to the unfavorable effect on the lamb. In order to test this point a third lot was added to determine just what effect the heavier feed would have on the lambs. This lot consisted of eight registered Shropshire ewes. At the beginning these ewes were fed a ration of 3.0 pounds of alfalfa hay and 2.5 pounds of silage. The amount of hay was gradually reduced and the silage increased until during the last 22 days they were fed all the silage they would eat and no other feed. This lot of ewes lost 7.4 pounds per head in weight during the feeding period of 62 days. While the ewes were in good flesh at the beginning of the test the loss made them a little too thin for most desirable condition at lambing. The fleeces also showed the poorer condition, there being more tendency toward tender wool on the part of those ewes on straight silage for a time.

It appears that the lambs were in as good condition at birth and the gains of the lambs were as rapid and the milk flow of the ewes practically as good as of similar ewes fed more hay before lambing. The loss in weight by these ewes occurred during that part of the feeding period during which the feed consisted of sunflower silage only. At first the ewes ate about six pounds of silage per head daily, but later they would not eat over five pounds with the result that they went down in condition. The average daily ration was 1.6 pounds of hay and 4.2 pounds of silage. This is not enough to maintain the ewes.

Our experience indicates that it is not good practice to depend on sunflower silage alone for feeding breeding ewes. They do not eat enough to keep them in the condition desired at lambing time even though the silage may be eaten fairly well at the start.

Irrigated and Dry Land Sunflowers

The silage used in these feeding trials was grown on irrigated land. It was rank-growing and fairly heavy in yield generally, ranging from 15 to 25

tons of green sunflowers per acre. It was higher in moisture content than most corn silage and therefore contained less real feeding matter per ton or per pound.

We have no information concerning the comparative value of sunflowers grown on dry land and those grown on irrigated land. The feeding value of dry land sunflowers would not be any lower and it might be somewhat higher per pound than of sunflowers grown on irrigated land.

Sunflowers require different methods of planting on dry land from those recommended for irrigated land. On irrigated land the best results seem to be obtained by planting in rows about 2.5 to 3.5 feet apart and about four to six inches apart in the row. On dry land the rows may be about the same distance apart, especially the wider distances, and the plants should be about 15 to 18 inches apart in the row. Otherwise there is not enough moisture and the plants tend to dry up and lose the leaves before they are mature. Thick planting on dry land results in smaller yields than thin planting. Thick planting on irrigated land is preferable for preventing excessive coarseness in the stalks and for the heavier yield per acre.

While no trouble has ever been experienced in making silage at the Montana Station and no reports of poor silage from sunflowers grown on dry land have ever come to our notice, in one section of the Yellowstone Valley, poor silage has always resulted from sunflowers grown on irrigated land. It is known that these sunflowers have too little sugar to provide for the normal fermentation and the formation of acids which preserve the silage. Silage made in such cases is of no value for feeding. According to our present information this experience has been limited to a small area. But it is entirely possible that other areas may give bad results. There are two ways of testing this point—first, by testing their behavior in the silo, and second, by determining the amount of sugar in the plants at the stage at which they are to be put into the silo. The former should be done in a small way

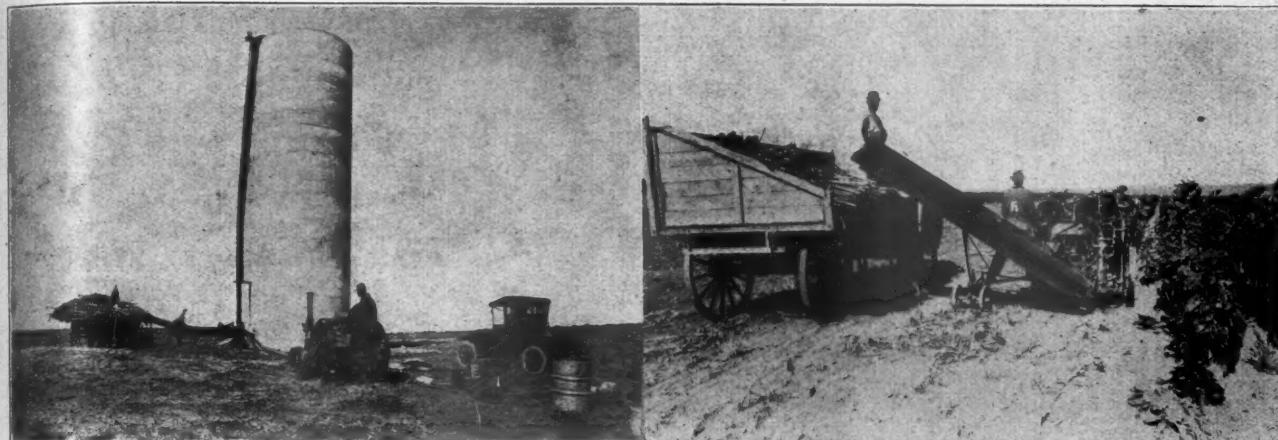
and sunflowers should be put into the silo by themselves—not mixed with corn or other silage crops, but in sufficient quantity so that the juices from other silage do not penetrate and preserve the sunflowers. The latter must be done by chemical analysis.

Where Sunflowers Should Be Grown

What is the place of sunflowers as a silage crop for feeding sheep? In the first place sunflowers require considerably more labor than hay crops. The crop is an annual one and requires seeding and cultivating every year. The labor of putting it into the silo is greater than that of putting up a hay crop. Special harvesting and silo filling machinery are required. On irrigated land, however, the heavy tonnage produced per acre makes possible the carrying of more livestock on limited acreage of feed crops than by growing hay as the only winter feed. On dry land the place of the crop is not so well established. It seems quite evident that it is not adapted to gravelly or shallow soil. A deep soil is required if the crop is to be a success on dry land.

The real place of sunflowers as a silage and feed crop for sheep is on those ranches which cannot produce sufficient roughage for wintering the stock, and especially in case hay cannot be bought to advantage. If hay cannot be obtained with reasonable certainty near at hand, and the sheep cannot well be moved for wintering to the hay supply, sunflower silage will help out greatly, because of the heavy yield on irrigated or sub-irrigated land, or on any deep soil with a fairly good moisture supply. If a moderate supply of roughage, in the form of grazing or browse, and a fair supply of hay are available we believe that additional feed can often be supplied more cheaply in the form of such concentrates as corn, oil cake and cotton seed cake.

The ability of the crop to withstand frosts makes it adaptable to higher, cooler regions giving it a decided advantage in this respect over corn. Sunflowers withstand as much frost in the spring as spring grains. They will



Engine and cutter were used five days to put 30 acres of sunflowers into the 50-foot concrete silo.

Cutting and loading dry land sunflowers at the U. S. Sheep Experiment Station.

withstand a temperature in the fall of 25 to 26 degrees with little or no damage. They also thrive better in cool summers than corn.

RAISING AND FEEDING SUNFLOWERS AT THE U. S. SHEEP EXPERIMENT STATION

One hundred and thirty tons of sunflower silage was raised on 30 acres of dry land last year at the Sheep Experiment Stations maintained at Dubois, Idaho, for the study of sheep problems of the Intermountain country.

The station has an elevation of 5,700 feet. The land used was broken and cleared of sagebrush in 1918. No crop was grown in 1919. The land is lava rock formation and the average rainfall is 16 inches. In 1920, the wheat crop on similar land was a failure, while about 5 tons per acre was the yield of sunflowers.

The seed planted was of the Mammoth Russian variety. It was planted with a corn planter, in rows four feet apart, early in May. Seven pounds of seed per acre was used and some thinning of the plants done later to prevent overcrowding and dwarfing. The crop was harvested during the third week of September. Cutting was done with the combined harvester and loader drawn by four horses.

Feeding the Silage on the Range

The silo at Dubois was built in the

center of the range where it was planned to run the band in winter to take full advantage of all the open weather in which the natural grazing could be used. The flock to which the silage was fed contained 1,300 cross-bred and grade Rambouillet ewes of mixed ages and 400 ewe lambs. This band was run on the range until December 15, 1920, and then fed at the rate of four pounds of alfalfa hay per head daily until January 28, 1921. The hay was of poor quality and the sheep were not in good condition when they went on the silage ration.

Silage feeding was begun on January 29 and continued until March 24, a total of 55 days. During the last five days the range was bare and the silage was fed but not any hay. The average feed per head during the 55 days was as follows:

- 2 pounds sunflower silage.
- 1 3/4 pounds alfalfa hay.
- 1/4 pound number 2 yellow corn.

The ensilage was fed in racks 12 feet long. One-half pound per head was put out the first day and on the second day it was eaten before the hay. On the fifth day the sheep were eating the full two pounds per head and continued to eat that amount without waste until the silo was emptied. The silage was given in two feeds, at daybreak one pound of silage for each sheep was put in the racks and while this was being eaten a part of the hay was spread on the ground. At three

o'clock in the afternoon the balance of the feed was given.

At the close of the silage feeding period, the ewes were in excellent condition for lambing. There were only two losses while the silage was being fed and there was no reason to attribute these to the feeding.

THE UTAH WOOL PLAN FOR 1921

The Utah State Farm Bureau and the Utah Wool Growers Association have joined hands to meet the wool marketing situation now affecting growers. Some details remain to be worked out by the marketing committee, but the financial arrangements are assured and growers have started signing up their clips for handling under the plan described in the letter issued by the two organizations and reprinted below.

It was stated by the sub-committee that prepared the first draft of the plan that it is essential that the marketing committee be given broad powers, which are to be conveyed by a power of attorney signed by the grower. It is the intention to employ an established wool selling house to do the grading and selling. Sales will be subject to the judgment of the committee, which will select the selling agency to be employed and direct the assembling, financing and handling of the wools. It is not considered pro-

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bable that adequate storage can be obtained in Utah.

Features of the plan, as described in the letter issued, are particularly worthy of attention:

1. The financial control of the wool will remain with banks within the state.

2. The growers, whose wool is or can be made free from mortgages, can obtain a part of the advance agreed upon by presentation of a bill of lading.

3. The selling agency will deal only with selling and will have no part in making the advances.

The following is the text of the letter issued in explanation of the plan:

"For a considerable time it has been very evident to the wool growers of this state that some co-operative scheme of marketing the wool should be devised and put in operation in order to secure for the individual grower the highest market price attainable for his product. The situation has become so acute as to require immediate action if the wool growers of Utah are to get a fair market price for their wool. We are convinced that by co-operation the wool of the state can be marketed so as to receive its reasonable market value; in other words, the price of the wool can be made to depend upon its class and value under market conditions rather than the ability of the individual grower to make a fair sale. A great effort is now being put forth, as you no doubt are aware, by at least a few wool speculators to retrieve the losses sustained through the recent decline. Having become convinced that unless some method or plan was adopted by which the wool growers would co-operate in the sale of their product a great loss would be sustained, and further realizing that unless, in some instances, immediate relief is had some of the growers face almost complete ruin, the Utah State Farm Bureau and the Utah Wool Growers Association have co-operated together in the organization of a Wool Marketing Committee. It is proposed to place in the hands of this committee the wool of the state with power to sell and gen-

erally handle the same for the grower. This committee having possession of such a large amount of wool would be enabled to negotiate loans upon the warehouse receipts issued for the same and thus secure needed funds to relieve the immediate necessities of the individual.

"Under the plan as suggested it is proposed that the individual grower will deliver to the committee his wool with full authority to ship, sell and generally handle the same in all respects as the grower could or might, himself, do. The wool will be received by the committee at the loading point of the grower and shipped to a suitable bonded warehouse where it will be held pending satisfactory sale. At the point of loading when the wool is received by the committee a temporary advance will be made to those requiring the same, sufficient to cover the expenses of shearing, transportation and loading the same upon the cars. When the wool has been received at the warehouse it is intended to take the warehouse receipt issued therefor and using such warehouse receipt as collateral security to the note of the individual grower, secure loans thereon from banks, either within or without this state. When this loan is made the actual expenses incurred will be deducted, as well as the temporary loan above referred to, and the balance remitted to the grower. Immediate funds will thereby be secured to the extent of a loan based upon the reasonable value of the wool so delivered.

"The committee has been designated as the Wool Marketing Committee of the Utah State Farm Bureau and is composed of the following individuals who have been appointed jointly by such Farm Bureau and the Utah Wool Growers Association:

D. D. McKay, president of the Utah State Farm Bureau, Huntsville, Utah; W. W. Armstrong, president of the National Copper Bank, Salt Lake City, Utah; A. P. Bigelow, cashier, Ogden State Bank, Ogden, Utah; M. S. Marriott, Marriott, Utah; U. T. Jones, Cedar City, Utah; W. D. Candland, Mt.

(Continued on page 42)

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SHIPPING HEAVY LAMBS ON FEEDERS' ORDERS

There are few men who are not more inclined to pass the buck than to take reproof by the forelock as a means of self-discipline. Likewise, there are a greater number of men who do what they like to do merely because they like it, than there are men who do what is best even when it antagonizes their preference. Ever since Aesop's dog dropped a real bone right out of his mouth for something more visionary; ever since somebody away back somewhere said that a bird in the hand is worth two in the bush,—men have been inclined to rake home the near dollar and let the future and the far-off dollar take care of themselves.

Everybody should turn a deaf ear to the calamity howler. The new philosophy of business calls him a millstone about the neck; to happy living he is a spook. But honest zeal in keeping the track clear of obstructions doesn't preclude keeping the spikes nailed down to the rails; it doesn't preclude maintaining a watch for real ledges that may cave upon the track; it doesn't preclude making use of the very best headlights available.

The sheep business has been in straits, we all know well enough. Other business and other lines of livestock endeavor have had their tremors and more than tremors, so we attribute our troubles to "reconstruction," "deflation," "world problems," etc. The other day I took the wrong train in a depot where there were only two possible trains to take,—and they went in opposite directions! Never before, even in the largest stations, have I ever taken the wrong train! This is the reason: I was so dog-gone sure that I knew my train that I paid no attention to the other train at all!

Now, while we gaze intently at this heavy black cloud of "reconstruction" and "world problem" magnitude, we must not forget altogether that there may be other clouds on the horizon that may even have something to do with the storm center and the atmospheric pressure; and if they do not,

who says that they may not float threateningly in the wake of the present storm cloud and deluge us in the future or compel us to keep reef in our sails indefinitely?

Sweet memories do not linger 'round the lamb-feeding plants and farmer's barns so employed the past winter! The erstwhile credit on those bank books does not appear to guide the feeder's warm interest in the immediate future! It is said that the place where money is lost is a good place to pick it up again; but on the other hand, the place where a man gets burnt is likely to be a place where he will get burnt again,—under the same circumstances.

I know farmers who put in heavy feeder lambs last fall and paid a heavy price for them. I know commission firms who consigned heavy lambs to the country and accepted a price for them that they should have turned down. Both weights and prices were a handicap of first magnitude. The farmer can just blame himself,—and the commission house; and the commission house can just blame itself,—and the farmer. They both knew full well that the market demands a handy-weight lamb around 80 pounds; the farmer was just gambling his money and time and sweat, while the commission house was gambling its reputation and good will in the eyes of the farmer.

The fact remains that the market demands a light lamb carcass; it demands a lighter beef carcass; it demands a lighter hog, a lighter chicken and a lighter turkey. Old standards won't go; we must cater to the consumer or take his backfire!

There is another man who needs a hit in this connection,—and it sure is a cruel act to strike a man when he is down! This is the ranchman! Quit producing such heavy, large boned lambs! You will always have a big spill of lambs to the feeder and he will always be your safety valve on the packer,—so cater some to him!

This brings us to another consideration: wool! Many years ago when I had wool to sell, fine might be higher

in price one year and medium the next. So far as I am concerned, even twenty-five years ago—and ever since—it has looked to me as if the great egress of mutton rams to the range was going out there to bring back,—not victory and substantial progress, but trouble! We have been raising the carcass weight of our lambs and piling up an inheritance of medium wool, when in the meantime the demand for lighter lambs and finer wool has been grimly working right in the opposition direction! The market does not want heavy lambs nor so much medium and coarse wool. We must regard the possibility of the consumer's liking lamb better and eating more of it if we would give him what he wants and not compel him to accept a product that a wrong trend has left in our unhappy possession.

As a man who owns no sheep and owes allegiance to no side of any controversy, I believe I may equitably say that the commission house may well guard its sphere as counsellor at the block, and hew to the line and not to the nearest dollar when it comes to stocking up the farmer with something that must lose him money. In this way the market most readily rejects the kind of stock that should not go out and in after judgment has been pronounced against it.

Propaganda of breeds must respectfully be left to the final arbitrament of the market, of course; it is a fair and fearless referee, and the most cherished ideals of the past have had to be abandoned or the penalty be paid. To the breed propagandist, however, the producer can afford to give but one ear,—the other he must give to the demands of the market—and when those demands become unmistakably insistent, both ears must be given to the market.

Wiser and more experienced men could say much more; but it seems safe to say we need a strict adherence to handyweight lambs, a higher percentage of fine staple wool, and a commission man who keeps his hand on the market pulse and who never drops his watch.

G. P. Williams.

LENGTH OF STAPLE AS RELATED TO FINENESS OF FLEECE

By V. O. McWhorter, U. S. Sheep Experiment Station.

Last month's article discussed the results of an experimental study of the relations between length of staple and weight of fleece. The record of 2,250 fleeces showed that length was the chief factor in increasing fleece weight. The figures upon the relation of length and fineness, in this article, show that the finest wools are likely to lack length.

The data we have collected on this subject (see Table II) cover a period of five years and involve a yearly average of four hundred and seventy fleeces. The wool designated in the upper left hand column of the table as "58's," identifies wool known as just a little finer than "half-blood" and a little coarser than "fine." The wool called "64's" and "66's" in the lower left hand column of the table would readily grade as "fine."

The average length of the 124 fleeces of "58's" secured in five years is 2.6 inches. On the other hand the average length of the 320 fleeces of extra fine wool secured during the five-year period is 2.2 inches. This data shows an advantage of four-tenths of one inch in length of staple for the coarsest fleeces as compared to the finest fleeces. This advantage holds uniformly for the coarser fleeces throughout each of the five years as shown in the average column to the right of the table. In each case the wools become shorter in staple as they become finer in fibre.

I am mindful of the fact that extremely fine wools sell at a premium over those not quite so fine. You may hold the opinion that this advantage would offset the disadvantage of the shorter staple. While we have not summarized any definite data on this subject, I might say that it is the belief of many Australian and some American breeders that the more robust is co-incident with a greater weight of clean wool and a larger and more muttony body.

But the importance of length as af-

TABLE II.
LENGTH OF STAPLE AS RELATED TO FINENESS OF FLEECE.

Deg.of Fineness		Year					
		1916	1917	1918	1919	1920	Av. 5 Yrs.
58's—Number of fleeces.....	28	12	20	24	40	124	
Av. length of staple.....		3.0 in.	2.9 in.	2.5 in.	2.4 in.	2.4 in.	2.6 in.
60's—Number of fleeces.....	72	40	106	89	86	393	
Av. length of staple.....		2.5 in.	2.5 in.	2.5 in.	2.4 in.	2.5 in.	2.5 in.
62's—Number of fleeces.....	136	129	186	190	125	766	
Av. length of staple.....		2.5 in.	2.4 in.	2.3 in.	2.3 in.	2.3 in.	2.4 in.
64's—Number of fleeces.....	197	178	86	101	163	725	
Av. length of staple.....		2.4 in.	2.2 in.	2.2 in.	2.4 in.	2.4 in.	2.3 in.
66's—Number of fleeces.....	95	109	11	26	79	320	
Av. length of staple.....		2.4 in.	2.1 in.	2.1 in.	2.2 in.	2.2 in.	2.2 in.

fecting the weight of the fleece and its selling price, must be considered. The Australian breeders' claim is that while there may be a small loss in having the stronger wool to sell, that such is more than over-balanced by the increased weight and length of the less fine fleeces.

RAILROAD AND BUSINESS LOSSES IN 1920

The deflation movement that caught sheepmen in May last year hung fire for a time but later extended to other commodities and to the transportation business. Figures as to retailers are not available, except those for Montgomery, Ward, and Co., included in the following statement from the monthly letter of the National City Bank of New York.

"A long story of industrial and mercantile losses suffered in 1920 might be made up from the reports of companies which by reason of the fact that their stocks and securities are widely held by the public are under obligations to publish the results of the year's business. Perhaps it would be well to have this information distributed in sections of the country where many people are laboring under the impression that the "big interests" brought on the fall of prices and have profited by it at the expense of farmers and small dealers.

"Among the big interests the railroads always have been pre-eminent, upon the theory that they are owned in Wall Street, which of course is far from being true. Nevertheless, the railroads are generally regarded as typical of "big interests," and so it will be well for those who are jealous of such interests to note that the decline of traffic has cost them about all

that they might have gained by the advance of charges which they were allowed last summer. Senator Kellogg, of Minnesota, in a speech in the Senate a few days ago, stated that the consolidated net earnings of the roads in September last amounted to 4.1 per cent upon the value of railroad property as fixed by the Interstate Commerce Commission; in October to 4.6 per cent; in November to 3.3 per cent, and in December to 1.1 per cent; an average for the four months of about 3.3 per cent. He stated that the Commission and the companies both realized that it was impossible to make rates that under present conditions would yield the return contemplated by the Esch-Cummins law.

"Another section of the "big interests" is included in the five leading companies of the meat packing industry, to wit: Armour, Swift, Morris, Cudahy and Wilson.

"With an aggregate capital investment of \$600,000,000 and aggregate sales of about 3,000,000,000, these companies in a consolidated statement would show no net earnings last year. Losses exceeded profits, and if the statements included the leather companies affiliated with them the showing would be much worse. The Armour Leather Company had a net loss for the year ending October 31, 1920, of \$4,313,653.

"The American Cotton Oil Company, another company dealing with a product of the farms, for the year ending August 31, 1920, showed a loss of \$3,611,560, against a profit in the previous year of \$422,814.

"In mentioning the packing companies we ought not to overlook the Equity Co-operative Packing Company of Fargo, North Dakota, which was promoted for the avowed purpose of

keeping the profits of the packing business at home and among the farmers. Stock to the amount of \$2,250,000 was disposed of, and about \$600,000 of the proceeds absorbed by the promoters. The company, however, got into business in time to lose, it is reported, about \$800,000 of what was left.

"We referred two months ago to the heavy losses that dealers were taking upon butter in storage. The situation not only has shown no improvement but grown much worse. The bulk of the winter butter supply went into storage at about 55 cents per pound, and has been coming out all the way down to 35 cents, from which there has been a recovery of 7 or 8 cents. Eggs have gone in the same way, falling from about 70 cents to 35, from which there has been a recovery of 4 or 5 cents. Millions of dollars have been lost by dealers in butter and eggs, the mild winter being an important factor in the result. Nobody could foresee when butter and eggs were stored eight or ten months ago that cows would give milk and hens lay eggs at the rate they have kept it up all winter.

"The Quaker Oats Company, which in 1919 had net profits of \$2,679,394, reports for 1920 a net loss on operations and depreciation of inventory of \$5,824,925.

"The Central Leather Company, one of the big leather companies, which began the year 1912 with assets of \$146,855,102, closed the year with a net loss on operations and depreciation of \$22,428,214.

"Montgomery, Ward & Co., of Chicago, one of the oldest and best known of the mail order houses, which made \$4,194,170 in 1919, sold \$101,000,000 of goods in 1920 and closed its books for the year with a net loss of \$7,855,278."

It is reported that 3,000,000 pounds of the War Department's stock of wool will be shipped to Poland. It is good to learn of some good purpose being served by this wool that has been such a hindrance to the wool trade ever since the armistice.

Culling and Selecting For Heavier Fleeces

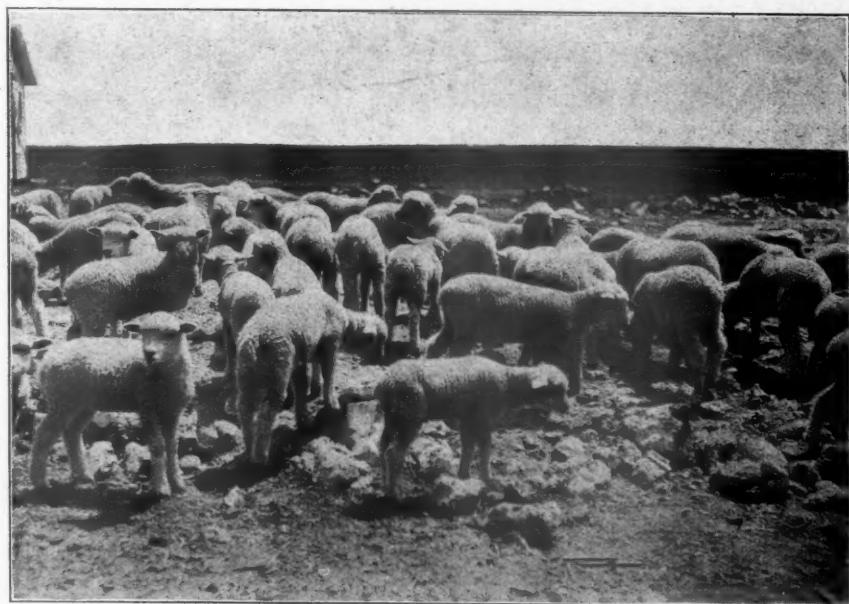
A Study of the Variation in the Weight of Fleeces Produced by Range Sheep and Suggestions for Improvement

A paper read before the Big Horn Basin Wool Growers' Convention by J. A. Hill, University of Wyoming:

From time to time at your past meetings, I have advocated the culling of range flocks in order to get rid of the ewes that were dragging down the average wool production. I advocated this culling of the worst or selection of the best, because in handling sheep and observing the fleeces taken off them at shearing time, it was clear to me that most flocks were made up in part of sheep producing very light fleeces and in part of others producing very heavy ones. The average weight of fleece for Wyoming in the last few years was about $8\frac{1}{2}$ pounds. It seemed to me that by selecting heavy shearing sheep this average might, in the course of a few years, be increased to 9 or even $9\frac{1}{2}$ pounds, without in any way reducing the meat producing value of the sheep, for there are a few flocks in Wyoming composed of cross-bred sheep of good mutton type that do produce $9\frac{1}{2}$ pounds of wool per fleece, the fleeces being at least as light in shrinkage as the average of the state.

These observations, though important in their bearing on the problem of increased wool production, were not as definite as would be conclusions based on a study of the weights and values of individual fleeces in representative range flocks. Last summer, I made a survey of the fleece weights in a few range flocks of the state. I will say at the start that the difference between the lightest and heaviest fleece was even greater than I had expected. Today it is my purpose to show you the results of this survey and discuss some of the things suggested thereby.

The sheep studied were five bands of cross-breds in Natrona County and the eastern edge of Fremont County



All lambs are beauties when young. As they mature the differences in their inheritance show up. What lambs will be as wool producers was finally determined last fall when the ewes were culled and the rams selected.

and one flock of unregistered Ramboilletts in Albany County.

The Record of Six Flocks

I will give the method somewhat in detail in the hope that you will make a study of fleece weights in your own flock. One hundred fleeces were weighed from each flock after the shearers were well started. Since the idea was to get fleeces that would be a fair sample of all sheared from that band of sheep, it would not have done to have weighed the first fleeces nor the last in a run. For everyone who has watched sheep being sheared knows that the first fleeces out after the pens have been filled are lighter than the average, and that the fleeces that come as the pens are all being finished are heavier than the average. The fleeces were weighed on ordinary spring balances in the order in which they came to the sacker or grader as the case might be. The weights were recorded to the nearest half pound, which was found to be closer than necessary, and they were afterward rearranged into groups showing the weight to the nearest pound. It is not much trouble for two men to weigh and record the weights of one hundred or more fleeces if the following method is used: One man hooks the fleece onto the scales and calls the weight to the nearest pound or half pound, according to which is being used. The other records the weights by making a mark opposite the proper figure on a tally sheet. When the hundred fleeces are weighed, the number of fleeces in each weight-group are added. Thus there is formed a table showing how many sheep out of the hundred produced a six-pound fleece and how many a seven-pound fleece, and so on. Table 1 shows these figures for each of the six flocks studied. Take for instance, flock "B," which I consider as being somewhat typical. It was composed of ewes from two to five years old. It will be noted that in the one hundred fleeces weighed from this flock, one weighed 4 pounds, one weighed 5 pounds, seven weighed 6 pounds each and so on down the column until we come to two

THE NATIONAL WOOL GROWER

April, 1921

fleeces weighing 11 pounds each. The average of the hundred fleeces weighed from flock "B" was 7.9 pounds.

TABLE I—Showing the grouping according to weight of 100 fleeces from each of six range flocks—

Weight to near- est Lb.	Number of Fleeces of Each Weight Flock "A" Flock "B" Flock "C" Flock "D" Flock "E" Flock "F"					
	3	1	2	—	1	—
4	25	1	2	10	5	—
5	35	12	7	23	7	—
6	19	23	14	30	35	—
7	13	33	21	26	20	2
8	4	22	17	9	18	15
9	1	6	17	2	13	7
10	—	2	13	—	1	8
11	—	—	5	—	—	23
12	—	—	1	—	—	28
13	—	—	1	—	—	14
14	—	—	—	—	—	6
15	—	—	—	—	—	5
16	—	—	—	—	—	—
17	—	—	—	—	—	—
18	—	—	—	—	2	—
Av.	wt. 6.3	7.9	8.8	7.1	7.8	12.6

By looking at the table a little further, it will be seen that, with but one exception, the central Wyoming flocks each had a few four-pound fleeces, and all had a few ten-pound fleeces. In every flock, the heaviest fleeces were at least twice the weight of the lightest. Flock "F" shows that there is this wide variation in the fleece weight of sheep that have been bred from the best of blood, if they are not rigorously culled. Flock "A" is a band of cross-bred yearlings of the same breeding as flock "B." It will be noted that the average weight of fleece for the yearlings is more than one and one-half pounds less than for the aged ewes. Since they are of the same breeding, they will, no doubt, reach the average of their mothers and elder sisters within a year or two.

If the samples studied are typical of the range flocks of Wyoming, they show that it is possible to increase the wool production of our flocks by culling the worst or selecting the best. The wider the variation in a flock, the greater the chance to improve it by culling. Flock "D" in the table is the most difficult to improve by culling because it is rather uniformly light all the way through. If a flock were composed of sheep, each one of which sheared, say, between $6\frac{1}{2}$ and $7\frac{1}{2}$ pounds, it could scarcely be improved at all by culling for higher wool production.

The Effect of Culling

Table II shows how it is possible to divide flock "B" into groups of various sizes according to weight of fleece, which is what actually takes place in culling.

TABLE II—Showing for Flock "B" the effect of culling all sheep that do not produce fleeces heavier than each of the weight groups—

Wt., groups, lbs.	Avg. weight of fleece culled, lbs.	No. to be retained, per cent	No. to be culled, per cent	Avg. weight of fleece retained, lbs.
4	1	99	1	7.9
5	2	98	2	7.9
6	12	86	14	8.2
7	23	63	37	8.6
8	33	70	30	9.3
9	22	8	92	7.5
10	6	2	98	10.3
11	2	100	—	11.0

For instance, if all the sheep from this flock that produce fleeces lighter than the seven-pound class were put in a group, they would constitute 14 per cent of the whole number and their average fleece weight would be 5.8 pounds. The sheep that remained for the other group would equal 86 per cent and their average fleece weight would be 8.2 pounds, making a difference of 2.4 pounds between the average of the two groups. The average of the heavy shearing group would be 0.3 pounds more than the average of the original flock. Again, suppose one were in a position to cull all sheep that did not produce eight-pound fleeces. The culled group would be 37 per cent with an average fleece weight of 6.5 pounds, and the other group would contain 63 per cent with an average fleece weight of 8.6 pounds, a gain of 0.7 pounds above the shearing weight of the original flock. The effect of culling would be more pronounced on flocks "C" and "F" and slightly less on flocks "A" and "D."

Flock "C" needs a special word; it is a mixture of a number of sheep much like those in the other cross-bred flocks and, in addition, a few heavy-fleeced Rambouilletts. If the heavy-fleeced sheep are the most profitable on that range, the owner probably should

change to that type as rapidly as possible and would then have a flock shearing at least as much as flock "F." On the other hand, if the heavier fleeced cross-breds are the most profitable type, he should get rid of the Rambouilletts as they and their lambs will always be misfits.

The tables show that the variation in the weight of fleeces in at least some range flocks is such that they may easily be divided into two groups, one of which will outshear the other two or more pounds. It is possible, therefore, to increase the average weight of fleece by culling. However, there is no magic in connection with culling whereby discarding a few sheep out of each flock will leave the remainder with an average fleece weight, a pound or two higher than the original flock.

Light Shearers Are Money Losers

Still, if the sheepmen look upon those that are producing only four or five pounds of wool as money losers, whose sale will stop a leak in his pocketbook, he will not have much hesitancy about getting rid of them. Suppose, in a normal year, it takes an average lamb crop and eight pounds of wool to pay running expenses. Then, every sheep that only produces four pounds of wool, owes an annual board bill equal to the price of four pounds of wool. It will take the profits from two ten-pound sheep to pay this board bill. Or suppose, wool is selling for 20c a pound and the sheep business is so profitable that each ewe that produces a four-pound fleece makes an annual profit of 5c. Then the eight-pound ewe will make a profit of 85c or seventeen times as much as the other. I leave it for an investment banker to figure out the relative book value of the two.

Same Sheep Shear Heavy Each Year

There is one question that must be answered in the affirmative if the increase of wool production by culling the light shearers is an idea that is going to work when put into practice. That question is, "Will the sheep that produces a relatively heavy fleece this

(Continued on page 39.)

April, 1921

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Around the Range Country

SHEARING AND LAMB SALES IN CALIFORNIA

I read with much interest the letters of other sheepmen in the journal and believe we would all profit one way or another if more of these letters were written, telling of any wool or sheep sales, prospects, and information regarding wages, feed conditions, etc.

I have never before seen the feed prospects so good this time of year.

The continued wet, muddy winter has caused somewhat of a hardship on sheep, but most everything is in fairly good condition.

A few who started lambing about the tenth of March in sheds on alfalfa hay, reported lots of twins, and if the weather keeps fair, there should be a large percentage of lambs marketed. Others start lambing about a month later on the range.

I cut wages to \$75 per month November first and others have been cutting during the winter without any trouble, as most of the men realize the serious condition and are satisfied. I believe and expect lambers and herdsmen will be plentiful at \$60, as that is more than they can get on ranches or anywhere else. They are lucky if they can draw their money, even at \$60.

The cattle men early last fall "kind of grinned" when they met a sheepman, but lately they pull their hats down over their eyes and say nothing, as they too are using their pencils pretty frequently these days.

J. V. Caldwell.

Canby, California.

SPRING IN SOUTHERN IDAHO

Spring is here, the sheep are on the range, and the sheepman is feeling more optimistic. That is the real sheepman, the one who has the ambition and determination to tighten his belt and smile and work through adversity as well as through prosperity.

The early lambing bands have made a high percentage of good lambs, and unless we have a late April blizzard the

range lambing will be equally good.

Though the reduction in the number of ewes is much greater than is generally realized, Idaho will probably ship more lambs than last year.

E. R. McClure.

JACOB A. DELFELDER

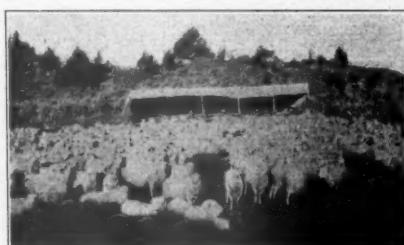
News is just received that J. A. Delfelder, of Riverton, died on the 28th at Rochester, Minn., after an illness of nearly a year and a half. He was one of the leading sheepmen of the state and one of its largest flockowners. He had served as president of the Wyoming Wool Growers' Association for five years, as a member of the State Sheep Board, and in the legislature, as well as mayor of his home town. He came to Wyoming in his youth, learned the sheep business from the bottom, starting as a herder, and worked his way to the top by his own efforts. In his earlier years he was the working partner of the firm of Bunce & Delfelder, and after the former's death took over the outfit and continued to develop and increase it. He was a pioneer with vision of the future. He developed the country in which he found place and with the increase of his own business helped his neighbors. He was one of the promoters and staunchest supporters of the National Wool Warehouse. "Dell," as he was known to his friends, was a generous, hospitable, big-hearted man, a booster, a developer, a pioneer, to whom his chosen industry and his home section and state owe much. He was a good sheepman and a good citizen.

SPRING FEED STARTED IN NEVADA

We have had a very nice winter all the way through, with plenty of snow for the sheep and feed better than it has been for years. We sold out of the sheep business two years ago when everything was at its best, but I still have a great liking for sheep. The last few days have been quite cold here, but the cold spell is not likely to last long. Green feed has started very nicely.

Mrs. Jane Zubiri.

Cherry Creek, Nevada.



Charles Kuhl's lambing shed in which 618 lambs were saved from 600 ewes

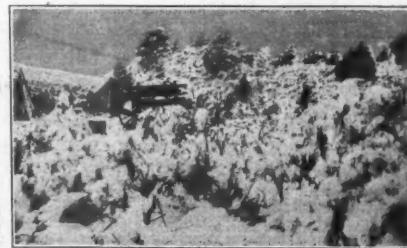
WINNING OUT ON HIGH PRICED EWES

My partner and myself started in 1919 with 600 ewes. We are feeling the pressure more than the old timers, but some of them are faring pretty slim, too. I think that unless we get some of the accumulated wool out to other countries we may need to rake and scrape for a year or two longer.

We lamb on the range but use a shed, of which I am sending you a picture. This shed filled the bill last year for handling 600 ewes. The canvas cost \$47.88, the lumber netting and labor making the total \$100. We docked 103 per cent of lambs and had 98 per cent on hand at weaning time.

My father, my wife and myself do all the work and our own shearing. I will say that money can be made out of sheep today if one is not afraid of work. Charles P. Kuhl.

Diamond, Oregon.



The lambing camp and grounds on the second day of the season

April, 1921

Railroads and the Wool Growers

Excerpts From An Address Delivered by Mr. H. V. Platt, General Manager, Oregon Short Line Railroad

"Speaking from the standpoint of the carrier, it is proper, I think, that I advise you in the beginning, that the only thing a carrier has for sale is transportation."

"We may, therefore, I think, safely reach the conclusion, that our interests and the interests of the country, or the interest of the carrier and the shipper, are irrevocably interwoven.

"Referring to the copy of proceedings of the Woolgrowers Association of one of our neighboring states, I find therein a criticism which I think in fairness, should be read, and I am going to read it to you:

"Whereas, it appears to stockmen that our railroads have taken advantage of every opportunity, regardless of how insignificant, to pile charge upon charge in the effort to wring from shippers all the traffic would bear and more. This is evidenced by the charge now made for disinfecting and sanding cars, the charges made for feed, the regulations governing the transportation of livestock attendants, the minimum weight on lambs, the exorbitant rates on sheep and wool, demurrage charge, the delay in settling livestock claims, and the insolent manner in which livestock shippers are treated generally."

"It is not my purpose to criticise and it may or it may not be that all these charges are justifiable, and I hope that what I say will not be misunderstood, because anything I may say is directed solely and entirely in the interests of a better understanding, without thought of criticism or without thought of any rancor or displeasure at the criticism just read directed against the carriers of the country.

"I desire to say in a general way with respect to charges for cleaning and sanding cars, and regulations governing the transportation of livestock attendants, etc., that we are still working under administration order No. 15766 regulating these matters, which is only subject to change as I understand it, by the Interstate Commerce Commission."

The speaker referred to the matter of feeding in transit, justifying the charges, and stating that in order for the railroad to buy in quantity it was necessary to buy the season's supply in advance, when the price "high or low, was uncertain." He showed wherein the company had made a reduction of \$5 per ton on January 15 and said other reductions would follow as soon as justified by conditions. He explained that drovers' attendants have been supplied with coaches for their accommodation so that they might rest and be comfortable. He explained that out of 296 trains, as per his own check, (between August 1 and December 31), only 44 did not make sixteen miles per hour, or better. The average was much higher. Wherever they traveled slowly, he said, it was due to handling live stock on some of the lower branches where grade and curve conditions require low speed, or delay caused by inspection.

"Going to the question of rates, I do not wish to be misunderstood in defending in advance of any conclusion this convention may reach, the rates in effect, or in any way committing the company to the question of higher or lower freight rates, as the case may be. I expect, however, to deal with the question of costs, which I am satisfied the majority of you gentlemen are not familiar with, but I do assume that you are familiar with the fact that the changing of rates one way or the other is a question governed by the rules and regulations of the Interstate Commerce Commission affecting all railroads throughout the United States and none in particular as deviating from general rule and application of the rate question. Transportation companies of the United States under the Transportation Act have certain obligations to comply with, and the government has a certain interest under the provisions of the Transporta-



H. V. PLATT
General Manager Oregon Short Line Railroad

tion Act in the earnings and expenses of the various properties.

"Now let us consider for a moment the use to which a double-deck stock car, which is the equipment used exclusively by sheepmen, is put to throughout the year. The normal season for handling sheep is four months, including the months of July to October, for market purposes; for shifting range purposes, the months of April and May. However, this latter period only consumes about 50 per cent of the normal requirements of market shipping. Therefore, reduced to service period, this means about 50 per cent idle time for double-deck stock cars. These cars, as you are aware, return empty from points of shipment which means another 50 per cent of idle time compared with other classes of equipment capable of carrying a load in both directions.

"Now let us go to the point of facing the situation in all its nakedness, and determine what effects increases in freight rates have had, as far as the ultimate consumer is concerned. I am advised a 70-lb. lamb will dress 50 per cent, or 35 pounds, with an addi-

tional 15 pounds for by-products, representing considerable values in the items of pelt, fat, head, dry blood and fertilizer. Based on the advance of August, 1920, the increased freight rate from Utah common points to the Missouri River, added to the dressed carcass of 35 pounds, is 6.2 mills per pound; and including the by-products, 9.5 mills per pound. From Idaho to the same destination, 6½ mills and 4½ mills respectively. If you would have inquired at the principal local markets in Salt Lake yesterday, and I assume the same price prevails today, you would have found that the dressed carcass represented by 35 pounds retails for 32 cents per pound, or \$11.20 per head. Let it be assumed that this retail price prevails at Missouri River points, the increase in freight rates represented by the increase of August, 1920, means that the increased freight rate on a dressed carcass of 35 pounds is 6½ mills or 22¾ cents per carcass. This is less than one per cent per pound for transportation on a dressed carcass represented by an average haul of nearly 1,500 miles.

"As stated in the beginning, the only thing a railroad company has for sale is transportation, and the only time in the history of Western railroads where any relief, generally speaking, has been afforded transportation companies in the matter of blanket increase in rates, is represented by the two rate increases in the past three years."

ALL CANADIAN 1920 CLIP SOLD

By W. H. J. Tisdale.

The above title may be somewhat misleading as it refers only to that portion of the Canadian 1920 clip that has been graded and handled co-operatively on a graded basis. All told, the annual wool clip of Canada approximates between fifteen and sixteen million pounds, of which at least four millions never reach the open market. This amount, it is estimated, is used up on the farms, particularly in the province of Quebec, in making homespun, yarn, comforters, etc. One-half of the remaining ten to eleven million, has, during the past season, been col-

lected and sold by the Canadian Co-operative Wool Growers, Limited, Toronto, Canada. Sales have been made on the open market in competition with all other wools and the organization is now in the fortunate position of being able to render final settlement to all of its 1920 contributors.

Advances were made of 15 cents on domestic and 20 cents on range wool, upon receipt of the wool at a central point in each province. Shipments were further financed in that the transportation was in each case paid by the organization and the handling charge of 2 cents per pound was not levied until the rendering of final settlement. Thus advances were really made amounting to 20 and 25 cents per pound. Under this system wool was contributed from the various provinces of the Dominion as follows:

British Columbia	176,475
Alberta	2,157,753
Saskatchewan	865,175
Manitoba	370,872
Ontario	640,810
Quebec	210,547
Nova Scotia	103,664
New Brunswick	69,983
Prince Edward Island	51,859
	4,647,138

This is a decided increase over the amount handled in any one year since the organization was established.

Every effort was made during the year to dispose of this wool with the result that up to December 31, 1920, 2,837,129 pounds had been placed at the very satisfactory average price of approximately 33 cents per pound. This average was made possible, of course, by the fact that several sales were made early in the season at prices ranging from 40 to 55 cents. These helped to balance such prices as 20 to 25 cents obtained in the months of November and December, all of which is simply an illustration of the falling market throughout the season. Right after the New Year, there seemed to be a somewhat renewed demand for wool and by the middle of February, the 1,800,000 pounds carried over had

been moved at prices that averaged about 20 cents.

Proper grading of Canadian wool has been the means of finding three market outlets, the most important of which is our own Canadian trade. This has increased in volume each season until we have in 1920, the Canadian sales amounting to over 40 per cent of the wool handled. It is confidently hoped that in a very few years all Canadian grown wool will be marketed right in Canada to Canadian mills. A good deal of Canadian wool has always gone into the United States and in 1920 some two and three-quarter million pounds were placed with the American trade. One hundred and thirty thousand pounds were also shipped to England, where it met with much favorable comment. In brief, the Canadian clip is now being graded in such a way that a three-eighths, quarter, low quarter staple or whatever grade it may happen to be, is the equal, and stands the same chance, as the same grade of wool produced elsewhere in the world.

Sheepmen in Canada have gone through trying times in the last twelve months but they are not discouraged. They are very rapidly adjusting themselves to the changing conditions and the sanest of them are staying with the business. They know money has been made out of sheep and will be made out of sheep again. Some, it is true, have disposed of their flocks, but they are "in and outers" anyhow, and did not deserve to have sheep in the first place. Lambs, properly bred and finished, have sold on Canadian livestock markets during the past four months at from 12 to 15 cents per pound. Such prices show a profit. Every arrangement is being made to care for the 1921 wool clip. Therefore, everything considered, the sheepmen of this country are not losing much sleep over thoughts of the future.

A shipment of 19 Rambouillet rams and ewes to Leon, Mexico, was made by W. S. Hansen from the flock which he exhibited at the Fort Worth show in March.

April, 1921

MORE ABOUT HEAVY LAMBS

By J. E. Poole

Feeders are directing profanity at the big lamb. At intervals weighty stuff has sold up to \$10, only to be set back to \$8@8.50 the moment an adequate supply appeared. No other explanation came from the killers' camp except that the product could not be sold and yet it has gone into consumption right along, none having been consigned to the rendering tank. A peculiar phase of the big lamb trade this season is that shrinkage in transit has been profitable. A band of 100-pound lambs, bought in Denver at \$7 per cwt., costs \$7.45 laid down at Chicago, if run through by packers. By getting an 8 to 10-pound shrink while on the rails it becomes eligible to the \$10 class on reaching Chicago by carrying less weight. This may appear paradoxical but when shrinkage in transit is taken into the reckoning a big lamb is worth more than a lighter one despite penalization. Never before, perhaps, has there been a profit in shrinkage.

Feeders avow determination never to put another crop of heavy lambs into the feed lot, but human memory is short and mistakes are readily repeated. The fact might as well be realized that the big lamb has come to stay. Putting fat lambs on feed in the fall is doubtless poor judgment as it would be more economical to let packers carry the dressed carcasses in their coolers, at least, until such time as consumptive requirements change and the public acquires a taste for heavy meat. If this season's experience is worth anything feeders should refrain from laying in lambs weighing 75 to 80 pounds next fall as it is evident that the trade does not want the product of 100 to 110-pound finished stock. However, it costs no more to raise an 80-pound than a 50-pound lamb, so that the best policy the breeder can follow is to go on raising the biggest possible lamb in the shortest space of time. While breeding is a factor in determining the size of a lamb at weaning time, condition is a weather proposition and condition has

considerable to do with size and weight. Last year was favorable to growth, consequently feeders found big lambs plentiful; a dry range another season would reverse this condition. It is probable, however, in the light of what has recently happened that feeders will give the big lamb a wide berth next winter.

How badly the big lamb has acted may be inferred from the fact that during March 100@110-pound Colorados sold on the Chicago market as low as \$6.25 on the bad spots, thousands being appraised at \$7.50@7.75. During the bargain sale Swift sent 2,500 head to Glasgow and Liverpool where weight is in better repute with satisfactory results, despite heavy expense and a bad journey. Much ado has been made about export trade as the term has a catchy sound, but the few thousand head taken for that outlet exerted no influence on prices. A band of fat ewes went to Cuba late in March at \$6.25 and a string of 128-pound wethers was taken on Liverpool account at \$6.25.

The system of buying Colorado lambs by the hundred-thousand at Denver and running them to Chicago by the trainload has been carried out to the distinct advantage of killers, if the unanimous testimony of salesmen is deserving of credence, as whenever a third of the receipts at Chicago are direct to packers from the Western market, salesmen throw up their hands and take whatever punishment is administered, unless, as sometimes happens, Eastern killers come to the rescue.

April found about 40 per cent of the Colorado winter feeding still back. The March run carried a large percentage of Colorado stuff with an excessive proportion of lambs weighing 90 to 100 pounds. Cornbelt feeders furnished the trade with a series of surprises, glutting the Buffalo market at intervals and dumping enough farm fed stuff into the hopper at Chicago to upset the calculations of those responsible for the movement of Colorados. Michigan, New York and Ohio had a habit of throwing big runs into Buffalo on Monday and Friday and where-

ever such congestion developed the prop was knocked from under the price list. The result was fluctuations of 75c to \$1 per cwt., within a few hours salesmen frequently losing their bearings so far as heavy lambs were concerned. The trade was deceived concerning the number of Western lambs the cornbelt states carried through the winter, doubtless because corn was cheap and weather favorable for making gains. Most of these lambs carried excessive weight which was distinctly to their disadvantage.

Never before have sheep or yearlings been as scarce at this season. This was a fortunate circumstance as few were wanted. During March wethers sold mainly at \$6.50@7.00 and yearlings at \$7@8, although light Mexican yearlings averaging 80 pounds, went as high as \$10.25. Most of the yearlings were so heavy as to bring them under the same penalty as big lambs. Killers depended on fat ewes for most of their heavy mutton supply, \$5.75@6.50 taking the bulk of the female stock.

CONSUMERS WANT FRESH KILLED LAMB

That American consumers demand fresh dressed lamb is attested by the fact that small Eastern butchers have taken thousands of lambs at Chicago recently, the big packers, to successfully compete with them, being forced to ship live lambs to their Eastern plants, even Chicago dressed stock losing the desired bloom after a 1,000-mile trip to the Atlantic seaboard in refrigeration. As shipping live stock is expensive the practice would be taboo unless imperative. These small Eastern killers have made money at the business, otherwise they would not have been able to increase their purchases of former years 50 to 100 per cent and get away with it. Freshed dressed lamb gets the money.

Send in the names of your neighbor sheepmen who do not take the Wool Grower. It will help them and strengthen the paper to get better results.

April,

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With the State Associations

MONTANA WOOL GROWERS' IN SESSION

Montana Wool Growers met at Helena on March 19th. Senator E. O. Selway presided in the absence of President Williams.

Matters of wages, legislation, and marketing were discussed and adjournment taken until April 18, at which time it is expected final action will be taken upon the report of the committee appointed to prepare a plan of financing and selling the coming wool clip.

The question of wages was discussed by members from all parts of the state. The following rates were adopted by the meeting:

Herders, \$50 and ranch hands \$40 per month. Special labor, such as irrigators, straw bosses or men who have been employed for years and are especially valuable for one reason or another are not included in this scale. It was also agreed that "wages for lambing shall not exceed herders' wages."

Shearing wages were discussed and a committee appointed to confer with the president of the Sheep Shearers' Union, who was present. The union held for 15 cents per head and board, and no agreement was reached. A motion that growers do not pay more than 12½ cents was lost. The matter was left to be reconsidered at a meeting called for April 18, at which time it is hoped some satisfactory agreement can be effected.

The chairman read extracts from the editorial of the Helena Independent which dealt with the activities of the Montana Development Association in killing the "Truth-in-Fabrics" Bill in the legislature. He spoke of the importance of this legislation to the wool growing industry as it would create a greater demand for virgin wool and pointed out that the public had every right to know the true contents of the goods they were buying. Wyoming and Nevada legislatures have enacted "Truth-in-Fabrics" bills.

Petitions were sent to the governor and to the legislature asking that the bill be re-considered at the special session. By unanimous vote the officers of the association were instructed, in event of failure of favorable action on the part of the legislature, to initiate the bill for the vote of the people at the regular election in 1922.

The secretary of the National Wool Growers Association reviewed the course of undertakings to secure an embargo or a tariff upon wool imports and predicted favorable action early in the session of the new Congress called to meet on April 11.

In discussing possible plans of handling 1921 wools Mr. M. A. Staff of the National Wool Warehouse and Storage Company made the following suggestions:

1. Incorporate the association or a subsidiary organization for the purpose of doing business.
2. Select managers from experienced and capable growers to manage a co-operative marketing business.
3. Make an agreement to stand together and store wool in a U. S. bonded warehouse, receipt from which would serve as collateral, and sell through one selling agency on a strictly commission basis.

Discussion brought out the fact that many of our Montana banks are in sympathy with this plan and that Chicago banks are willing to assist in every way to help finance such marketing organizations. Mr. Staff expressed the opinion that it would not be necessary for members to surrender entire control of their wool under such a plan, unless so desired.

Realizing that this is quite a large undertaking and that detailed plans for warehousing, financing and sales organization would take careful thought and consideration the chair was authorized to appoint a committee to work out ways and means for Organizing, warehousing and selling the 1921 clip of Montana Wool. The committee appointed consisted of M. H. Gerry, Jr., Helena; S. P. Wilson, Deer Lodge;

H. H. Pigott, Helena; J. E. Morse, Dillon; J. H. Carmichael, Augusta. They will report at the next meeting set for April 18.

The Montana association is in a flourishing condition. The membership is increasing rapidly and many strong local organizations are being formed. These are branches of the state body and a fee of \$8 gives membership and privileges in both associations.

MEETING OF EXECUTIVE COMMITTEE OF WASHINGTON WOOL GROWERS ASSOCIATION

The executive committee of the Washington Woolgrowers Association, in monthly session at Spokane, March 22, started a fight for lower freight rates on their product to Eastern points; subscribed for \$250 worth of stock in the \$100,000,000 Foreign Finance Corporation and urged members to do likewise to the extent of their ability; endorsed the candidacy of J. B. Campbell of Spokane for appointment to the Interstate Commerce Commission; re-asserted that \$60 is the highest wage for sheepherders that the industry will stand; and scored Governor Louis F. Hart for his "narrow-mindedness and ignorance" displayed in the exercise of his veto powers on agricultural legislation. On the subject of wages, the committee expressed the belief that helpers who were loyal during the war will stand by a stricken industry until wages can be increased again. The fight on freight rates, in which the assistance of the traffic department of the Spokane Chamber of Commerce has been invoked, takes two angles. An effort will be made to procure a temporary reduction until permanent relief can be secured, to tide woolgrowers over the coming months and perhaps prevent wiping out the industry through sale of breeding stock. A joint fight will be made to procure tariffs which will do away with discrimination in favor of Pacific Coast points of ship-

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ment. Resolutions adopted point out that the present rate on wool from Portland, Oregon, to Boston, is \$1.66 per 100, while from points 300 to 800 miles inland the rate is \$2.17 to \$2.59, with the Portland rate as a base and an arbitrary charge added to it.

On the subject of the governor's veto of agricultural measures in which the sheepmen were interested, resolutions declared that the action "convicted him of such ignorance of the livestock industry as to be the source of great mortification to an agricultural state, and charged him with bad faith in crying economy when he allowed \$5,000,000 road appropriations and large sums for the executive mansion to be spent under his personal direction, to stand."

"It is a political error second to none in the history of the state that the governor should have vetoed the bill which provided that the bonds of the farm land banks should be legal investments for savings banks," the sheepmen asserted.

ANNUAL MEETING OF NEW MEXICO WOOL GROWERS

A spirit of optimism backed by discussions of relief measures characterized the New Mexico Wool Growers' 18th annual convention, held at Albuquerque, March 25th and 26th. Prager Miller, president of the association, in his address, sounded hope for the industry in predicting immediate passage of an emergency tariff bill by the new Congress; in urging closer cooperation between bankers and wool growers and more compact organization of wool growers themselves; in endorsing the plan of pooling wool for selling purposes and the French-Capper truth-in-fabric bill; and in advising strict economy and curtailment of running expenses.

The balance of the first day was used by the following speakers: J. A. Willingmyre, who outlined a plan for the erection at Kansas City of a mill for the grading, sorting, scouring and baling of wool; W. E. Mauger, a sheep dealer of Albuquerque, who declared

that a tariff could not be expected to lighten all the sheepman's burdens and that stimulation of the public to buy now is necessary in order to revive mill activity; Colonel William B. Greeley, chief forester of the United States; W. E. Morley on "Organization"; J. D. Hannah, internal revenue collector on "Federal Income Tax Returns by Sheepmen"; T. W. Trevelan, general livestock agent of the Santa Fe Railroad on "Transportation of Livestock"; and by H. K. Holman, U. S. Investigator of Warehousing on "Wool Selling as Affected by the Federal Warehouse Act."

Senator H. O. Bursum, New Mexico sheepman, who recently took his seat in the United States Senate, opened the second day's session by pledging his loyal support to the sheep industry.

"The present Congress is strong for protection," Senator Bursum said, "and I feel sure of my ground in stating that they will pass the Emergency Tariff Bill within a short time after convening.

"A protective tariff will help, but the fate of the stock industry depends on yourselves. The faith, devotion and energy which you are willing to give to the business will be its measure of success. The industry must be scientifically and economically handled."

Thoroughly defining the stand he will take in the Senate regarding the stockmen legislation, Senator Bursum concluded his address with the statement that, "You wool growers and cattlemen can rely on me making my best efforts in assisting this industry, which I consider one of the most important in any country."

Senator Bursum was followed by E. N. Sherer of Armour & Co., who represented the packers. In discussing the tariff question, Louis Ilfeld of Albuquerque urged the necessity of a tariff measure that included the manufactured article as well as the raw wool in order to keep the American mills running at normal capacity. "Some Conditions and Diseases Affecting Sheep in New Mexico" was the subject of an address by Dr. Schnieder, inspector for the U. S. Bureau of Animal Industry; Problems in National Forest grazing administration were discussed by Frank C. W. Pooler, district forester; the work of the Biological

Survey in New Mexico was outlined by Dr. S. E. Piper, assistant biologist, U. S. Bureau of Biological Survey; and N. A. Field, state land commissioner, spoke on "Live Stock Interests and State Lands." J. B. Herndon, president of the State National Bank at Albuquerque, endorsed the plan of having Federally licensed wool warehouses in New Mexico and the use of warehouse receipts as collateral for loans.

The business session of the convention authorized the secretary to send to President Harding the message framed by the resolutions committee in which the condition of the wool growing industry in the West was described and which carried the following resolutions:

"Resolved, that we heartily endorse all the resolutions of our parent organization, the National Wool Growers Association, in its convention held in January, 1921, having for their object the relief of the sheep industry.

"Resolved, that pending the passage of tariff legislation we recommend an embargo upon the importation of wool, manufactured wools and sheep skins with or without wool upon them.

"Resolved, that in case our president should not see fit to exercise his right of embargo, we strongly recommend the repassage of the Fordney Emergency Tariff Bill.

"Resolved, that we particularly endorse the French-Capper bill, commonly known as the Truth-in-Fabrics Bill, as providing just and fair protection to the buying public and minimizing the unfair competition of wool shoddy with virgin wool."

Resolutions were also passed seeking to have all inspectors of the sheep sanitary board pass an examination before the United States Bureau of Animal Industry as to their technical qualifications. The Federally licensed warehouse principles were endorsed. Resolution was also adopted seeking to obtain a bill of health for lambs shipped into other states, requiring such a bill from the inspectors of the sheep sanitary board.

After the re-election of the present officers of the association, the convention adjourned to meet next year at Roswell.

GET THE BULLETIN ON 57 SHEEP DISEASES

"Diseases of Sheep" is the title of Farmers' Bulletin 1155 from the U. S. Department of Agriculture and written by Dr. Bernard A. Gallagher.

Each of the diseases is discussed under the headings, cause, symptoms, postmortem appearance, diagnosis, treatment and prevention. The discussions relate to 16 infectious diseases, 9 general diseases, 16 diseases of the head and air passages, 2 nervous diseases, 3 diseases of the urinary system, 9 diseases of the reproductive system, and 5 skin diseases.

The loss of sheep that occurs every season in every range band is the most serious leakhole in the sheep business. In fact a loss of ten per cent is not a leak; it is a tremendous disappearance of capital which no business can continue to stand.

These losses from disease are largely preventable. They are not generally prevented because the herder is incompetent or indifferent and the owner is seldom on the ground. If a veterinarian is called he seldom is able to give directions to bring about a recovery or prevent the spread of the trouble. In cases of scab and other, better known, outbreaks he is competent, but the ailments that really cause the losses are varied, numerous, and often as new to the practitioner as to the sheepman.

There has been a great lack of training for veterinarians in respect to the smaller animals. It may be said that the possible income to be derived does not justify special preparation for country practice but such practice would be much more remunerative and generally appreciated if better service were given.

Farmers' Bulletin 1155 is the first serious attempt of the Bureau of Animal Industry to put into popular form the knowledge that exists regarding sheep troubles. It is written in fairly plain language. Anyone who wants to check his losses can get a lot of help from it. It should be thoroughly studied by every sheep owner. Copies can

well be left with the herders following a talk with them about its use and the application of the remedies and treatments outlined.

Send a post card asking the Department of Agriculture, Washington, D. C., for Farmers' Bulletin 1155.

"Parasites and Parasitic Diseases" is the title of another Farmers' Bulletin, No. 1150. Like No. 1155, it is for free distribution and one post card to the Department of Agriculture, Washington, D. C., will secure both. While written in part for owners of farm flocks this bulletin contains much valuable information and many suggestions for prevention and treatment of scab, ticks, grub in the head, screw worm, gid and stomach worms.

The March 1 cold storage holdings of frozen lamb and mutton were 59,678,000, which was 18,000,000 pounds less than on February 1. The reduction is reported as largely due to re-exports to England. It is known that the holders of the carcasses are sick of the deal and it should be a long time before such large shipments are again brought in.

A REAL REPRESENTATIVE

The business difficulties of recent months have given prominence to number of men having the ability and the courage successfully to attack the problems confronting the nation and affecting the welfare of all American citizens. The December Wool Grower presented photographs and short sketches of the work of United States Senators and Congressmen who were fitted to serve in the proper consideration of the sheep industry in relation to national policies.

Congressman George M. Young, of Valley City, North Dakota, is not particularly identified with sheep matters, but he is one of those whose ability and courage have made him prominent at Washington, particularly since December first.

Early in December it seemed that



Congressman George M. Young of North Dakota. He is an aggressive and respected advocate of a fair deal for agriculture.

the question of protecting American producers from a flood of imports would not be acted upon by Congress. Mr. Young was the leader of a group of Congressmen from the West and South who appreciated the seriousness of the situation and were resolved to provide the most effective remedies possible. It was largely through the efforts of these men, acting in harmony with like-minded Senators, that the Fordney Emergency Tariff Bill was promptly sent to the Senate with a very strong majority in its favor.

Mr. Young, it has been announced, will be in charge of the Fordney bill when it is re-introduced in the special session of the Sixty-seventh Congress. He is a member of the Ways and Means Committee and his assignment to this place permits Chairman Fordney and other members of the committee to complete the writing of the regular bill and at the same time have an experienced, most able representative on the floor to present and urge the necessity of the nation's protecting itself by action that is adequate to sustain farming and livestock interests."

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EDITOR.....F. R. MARSHALL
Salt Lake City, Utah

ASSOCIATE EDITORS
F. A. ELLENWOOD....Red Bluff, California
ROSCOE WOOD.....Douglas, Wyoming
J. E. POOLE.....Chicago, Illinois
HUGH SPROAT.....Boise, Idaho

EXPLOITING AGRICULTURE

The western stockraiser has a great deal at stake in the threatened conflict at Washington between manufacturing and agricultural interests. Other farmers, both east and west, have an equal interest but apparently are less informed or less appreciative of the seriousness to them of what is being attempted.

The idea of securing to American manufactured articles an advantage over foreign goods in American markets is neither now nor illogical. Giving similar protection for our own agricultural products is an equally old and an equally logical idea. The difficulty lies in the fact that the strongly represented factory enterprises do not recognize as logical, a governmental policy that looks to the future and concerns itself with the business of food production, which determines American standards of living in city homes no less than in country dwellings.

They have been trained, it must be admitted, to consider that they should have the preference in selling to Americans while the farmer sells at home in competition with the world. In 1913 the Democratic tariff bill placed agricultural products on the free list while retaining duties upon manufactured articles. Roll calls in Congress in recent months show that tariff matters are not now settled by partisan votes. The discussions have been more along the lines of local interests, rep-

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resentatives of manufacturing sections favoring protection for factories, while those from the South and West have supported the policy of a preference in home markets for the output of all our industries.

As matters now stand, this country is being asked to leave the bars down for imports of food and clothing materials in order to build up an export trade in manufactured goods. The cheap foreign supplies are desired both as a means of payment for the exported goods and as a means of holding down living costs. Any means of holding down expense of living should mean lower factory wages and thereby an advantage in competing with the manufactured products of other countries.

The policy is really one of doing what President Harding called "continuing to exploit our agricultural resources for the benefit of our industrial and commercial life." Followed out it means for the United States an uneducated peasant class on our farms and a growing dependence upon imported food, thus repeating what some other countries have already done. When the United States was in the throes of civil war a national policy toward agriculture was adopted from which we do not believe the country will now depart if it has all the facts and their meaning before it. The Morrill act provided for education in agriculture and the mechanic arts. It was the first adequate recognition, by any country, of the ultimate and complete dependence upon the soil and the labors and well being of the people who cultivate it. In numerous measures Congress has since shown its adherence to that policy by further providing for the scientific education of farmers. This has been done not only to increase our agricultural production, but also in recognition of the need of that public opinion that develops away from the distractious of modern city life.

We do not believe that the United States is going to change so wise an historic policy and turn to the exploiting of its farmers. The question is not a political one, though it has become such in other lands where agrar-

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ian interests were compelled to resort to political measures. There are in Congress today a number of men who consider the logical development and upbuilding of our agricultural in keeping with our manufacturing, to be as vital a question as any of those that now divide political camps.

HOME FINANCING

Some features of the Utah Wool plan for 1921 are more significant than appear at first sight. The facility for withholding from an over-loaded market merits consideration. The direction of warehousing and selling by a competent group of public spirited men marks a new departure in wool affairs. The arrangement for loans and advances in a dull season is a service not yet offered by any other agency.

The most significant thing of all, however, is the fact that the securing of the loans upon the wool and the making of the advances to the growers from the money so secured, is being handled by the home banks. This brings the grower and his banker into full control of the selling of the wool and unites those who run the sheep and those who finance them, as they have not been before been united in selling matters.

The proposed plan of financing takes advantage of the use of warehouse receipts and Federal Reserve discounting facilities. It leaves the financing of wool in the hands of home bankers who best know the needs and merits of the individual growers. This means that the selling agency is to make sales and do nothing more. "Let the shoemaker stick to his last" is good doctrine. We must have growers and bankers and salesmen. We have largely combined our bankers and salesmen in the form of the advance making commission houses. Now we are profiting by experience and putting every man at his own real job. The service is required and it is a matter of getting the best service at the least cost. The separation of financing and selling helps to secure these results and at the same time combine those in the producing sections to deal as

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they should with the combined interests of the buying sections.

The Utah plan means more than is apparent at first sight. It is the road to a realization of what has long been wished for and talked of but only now put into working shape.

THE FREIGHT RATE SITUATION

The railroads are offering the customary reductions in rates for sheep moving to and from the summer ranges. The reductions, however, leave the charges considerably above former years.

A complaint filed with the Interstate Commerce Commission in January by the National Live Stock Shippers' League on behalf of its affiliated organizations of which the National Wool Growers Association is one, has so far resulted in a restoration of the old rates for cattle moving from the dry areas of the Southwest to northern pasture ground.

The last raise in rates was granted to enable the roads to pay the wages announced by the railway labor board. This board has not yet approved suggestions for revising wages downward and downward revision of the freight rates awaits decision upon the wage question.

The chairmen of the Interstate Commerce Commission and the Railway Labor Board have been asked to present their views and recommendations at the White House. It does not seem that the matter is one that needs to go back to Congress if the two bodies mentioned can be brought to function as was anticipated by the Transportation Act. Unless the board is brought to the point of facilitating a change of wages, it will remain for the roads themselves to secure it or to make a rate reduction in advance.

In the meantime, the National Wool Growers Association and the Boston Wool Trade Association have petitioned the Interstate Commerce Commission for a reduction of one-third from present freight rates on wool and for an examination, to be conducted by the commission, into the basis of the present rate.

What the Association Is Doing**TARIFF PROGRESS UNDER THE NEW ADMINISTRATION**

The Sixty-seventh Congress will convene in special session on April 11. President Harding and his cabinet recognize the necessity of all possible action to put business into a position to right itself. The questions of regulating imports and of revenue and taxation must be settled to clear the way for production and to enable the new heads of departments to forecast governmental income and scopes of activities.

Soon after March 4 the administration was strongly counselled to place tax revision in first place on the program of the new Congress. The floor leader of the majority in the lower house, Congressman Mondell from Wyoming, announced that tariff action should be deferred until the tax and revenue measures were completed. Enactment of an anti-dumping law was also proposed. This could only prevent the sale of goods to this country at prices below those for which they were sold within the countries of their production and could be of no benefit to articles now on the free list. Immediate tariff action, it was said by interested volunteer advisors, could not benefit agricultural products, because their 1920 products had passed out of their hands. That agricultural commodities are still quite largely owned by their growers was either unknown to these men or the facts were ignored or concealed.

Twelve senators from Western States asked and obtained an audience with President Harding on March 17 to present the condition of agriculture and the extreme need of early tariff action in the interests of owners of unsold crops and to establish in the minds of farmers, stockmen, and their bankers the confidence without which production could not go on in 1921. President Hagenbarth accompanied these senators and acted as spokesman for the sections and industries represented. The question of embar-

TO SELL SHEEP AT OLD RATES

The executive committee of the National Wool Growers Association has voted to give its endorsement and support to sheep commission houses to be opened by Mr. A. J. Knollin at the principal markets. The charges for selling will be not to exceed \$16 per double deck car. The houses are expected to be in operation by June.

This plan has also been endorsed by the executives of the Idaho and Utah Associations and assurance given of support by sending shipments to Mr. Knollin's houses which offer the only opportunity of securing competent selling service at a price which the sheep business will stand.

The commission houses will be under the direct personal management of Mr. Knollin with no expense or obligation upon the part of sheepmen and organizations further than to see that the new houses are given the volume of shipments they deserve and which they need in order to do the business at the low rate.

going imports by executive action was discussed. President Harding expressed surprise over the condition as presented and arranged for further conferences between Secretaries Hoover and Wallace and Mr. Hagenbarth, Senators Smoot, Gooding, Stanfield and others. The secretaries readily recognized the need of the action demanded. The question was gone over by the full cabinet, meeting with the President the following week and announcement made that the re-introduction and passage of the Fordney Emergency Tariff bill in the form agreed to in the conference committee of the last Congress, should be the first undertaking of the special session. Senator Penrose and Chairman Fordney stated that the measure could be passed within ten days.

As it is to be introduced the bill will provide for collection of duties at the rate specified for a period of six

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months. This will allow time to frame and pass a revenue measure and a permanent tariff bill. For immediate aid to manufacturers of products not covered by the Fordney bill, an anti-dumping measure may be considered and provision made for collection of duty upon the American value of goods imported. This would overcome in part the effects of the inequality in rates of exchange.

Preparation of the regular tariff bill will occupy the Ways and Means Committee for some time beyond April 11. On account of the fact that the time of Chairman Fordney will be so largely taken up by this committee work, it is expected that the introduction and handling of the measure presented by him last session, will be made by Congressman George M. Young of North Dakota.

Chairman Fordney, with Congressmen Watson of Pennsylvania and Bacharach of New Jersey are acting as a sub-committee in the writing of Schedule K. It was reported that the duty of 44 cents per pound of clean content as asked by the growers during the hearings might be reduced to 35 cents. It was also rumored, and denied, that it was planned to adopt the antiquated and unjust system of fixing duties upon the grease basis. President Hagenbarth, in interviews with the sub-committee as requested by them, has vigorously maintained that the duties should be upon the "clean content" basis and sufficient to equal the difference in costs of production in the United States and in exporting countries.

THE WESTERN WOOL GROWERS ASSOCIATIONS

Some misunderstanding has arisen regarding the above name, over which advertisements of virgin wool cloth, men's suits, and blankets, have been published in the Wool Grower.

The Western Wool Growers Association is the name of the company formed by Dr. H. C. Gardiner of Montana to do the business discussed and approved at the August and January meetings of the National Wool Grow-

ers Association. The Montana Wool Growers Association first took up in an active way the work of getting Western wools made up and cloth distributed at a greatly reduced price to wool growers and others. Other state associations were asked to meet in Salt Lake in November to arrange for handling the business in a broader and larger way.

It was soon found that no existing organization was in a position to handle the financial requirements of getting the wool through the mills and the product distributed. At the January convention the work as inaugurated by Dr. Gardiner was endorsed and the executive committee authorized the President and Secretary to arrange for the preparation and use of an association guarantee label to be made available to concerns wishing to use it and giving assurances of turning out goods of satisfactory character. Such a label is now in use by the Western Wool Growers Associations under the direction and personal supervision of Dr. Gardiner.

The rather inclusive company name was designed to express the arrangements which it was considered would soon be necessary in receiving wool from and delivering cloth and clothes to associations of wool growers in Western states. The Western Wool Growers Associations has no other business than the manufacturing of virgin Western wool and the direct selling of the products. The business is handled at Room 404, Conway Building, Chicago, Ill.

AFFAIRS IN UNTAH BASIN, UTAH

The weather in the Uintah Basin is fine. As mild a winter as we have ever had has been followed by an early spring. The bud sage started budding in February; garlic has been up two weeks and even checo is budding now. There is not a sheepman who has had to feed a grain of corn in the basin. Sheepmen who had to sell their winter bungalows in California last spring did not long for them this winter.

Sheep are lambed here on the bad

lands in April and May and the crop should be normal. One sheepman lambed in sheds in February and docked 110 per cent. It certainly seems to be a paying proposition on \$5 hay, but it is not "fashionable" here.

Herders' wages are from \$75 to \$65 per month. Also, I do not see as many queen olives and canned grapes in sheep camps as there were last winter.

Only one small bunch of sheep has changed hands. Three hundred eighty-two, light-boned, poor shearing ewes sold at a bank foreclosure for \$5.50 per head.

J. Monaghan.

Jensen, Utah.

SOUTHERN UTAH

We are living down here in the roughest part of the state of Utah, but are doing a fair business with our sheep. It is a range proposition entirely. Owing to lack of rain last summer the fall feed was very short, but with the mild winter just past, the sheep have done well.

The lambing prospects are good and our wool will be clean and of good staple. We are now up against the real thing with no money to pay for the shearing and no place to get any. But we feel that our president, Mr. Hagenbarth, and his co-workers have done a great work for us and we would be down and out if it had not been for their help. The tide is turning now in our favor and all will be well in another year.

John H. Davis. Cannonville, Utah.

In 1920 Great Britain and Ireland imported 8,642,000 mutton carcasses and 3,837,000 lamb carcasses. In 1918 they received 2,442,000 carcasses of mutton and 2,028,000 of lamb. The 1913 figures amount to about the same as those of 1920, but showed a larger proportion of lamb, being 7,377,000 for mutton and 5,559,000 for lamb. In 1920 the lamb carcasses came more largely to America, but the British consumed the mutton that cannot be disposed of in this country.

ADVANCING ON ARIZONA WOOLS.

Some of the sheepmen who did their shearing early in Arizona got through on paying 10 cents and board. We started today, (March 30th) at the rate of 12 cents and shearers pay for their board.

Some Eastern wool houses have their representatives on the ground here, but no buying has been done. Fifteen cents has been advanced on some clips.

The range is in very bad shape from the drouth and it is hard to see how we can get through with prospects of their being no spring feed.

H. E. Campbell.

Flagstaff, Arizona.

GENERAL MANAGER FOR OREGON WOOL AND MOHAIR GROWERS ASSOCIATION

R. A. Ward, formerly vice president of the First National Bank of Bend, Oregon, has been elected by the organization committee to act as general manager for the Oregon Wool and Mohair Co-operative Association. Mr. Ward has been prominently identified with the wool and livestock interests of the state for several years. When connected with the Bend bank he served on the executive committee of the State Wool Growers Association and assisted in the marketing of central Oregon wools. During his work with the bank he imported the foundation stock for several pure-bred sheep ranches from some of the best flocks in the Northwest. In his new position he will direct the selling of the western Oregon wools for the members of the newly organized Oregon Wool and Mohair Growers Co-operative Association. Mr. F. W. Herrin of Ashland is president of the organization, Mr. J. B. Cornett, veteran Shorthorn breeder of Shedd is secretary-treasurer, and Wm. Riddell, Jr., prominent sheep breeder of Monmouth, committeeman at large. The offices of the concern will be in Portland.

Wool Talk From Boston

Ohio Delaines Make 43 Cent Top Price—Effects of Imports Felt—Business in New Wools Not Started.

The effect of recent heavy importations made in anticipation of tariff action has been seen in the softening of prices for Territory staple and French combing wools during March.

Where deals, a month ago, were fairly firm at 95 cents (scoured) for choice Territory fine staple, it would now be difficult to get 90 cents. A similar change has come to half-blood staple and fine medium grades.

Salesmen say that they find it very difficult to interest buyers in their choice wools at what they consider fair prices on account of the competition of foreign wools. Most of the big mills have their buying limits, beyond which they are careful not to go. If they can not get just what they want at their figure, they can, at least, they say, get "something just as good." Thus they are able to use the free offerings of fine Australians as a club with which to beat down the price of domestic wool.

Other grades of Territory wool have also felt the effect of the depression. With fine staple at 85 to 88 cents clean, and occasional choice lots at 90 cents, half-blood staple is not out of line at 75 to 80 cents, nor fine and fine medium at 70 to 75 cents for wool having a French combing edge and 65 to 70 cents for strictly clothing, three eighths blood staple at 55 cents and quarter-blood staple at 45 cents.

Medium grades of domestic wool, both Territory and fleece, have been helped by the activity shown in knitting yarns. One large Philadelphia concern has been a steady buyer of quarter-bloods for months, taking large lots of Iowa, Illinois and similar wools stored in Chicago. Most of these have sold at 25 cents or less in the grease. Three-eighths-bloods have not been quite as active as quarter-bloods, but both grades have shown relatively more strength than the finer grades.

Quite heavy sales of original bag fine and fine medium Territory clothing wool are reported to have been

made during the month on the clean basis of 70 cents. Reported sales of Territory have also included fine staple at 34 cents in the grease; half-blood staple at 32 cents; fine and fine medium clothing at 27 cents; half-blood Montana at 80 cents clean; quarter-blood staple at 21 to 22 cents in the grease; three-eighths-blood staple at 23 to 25 cents in the grease; and choice quarter-blood staple at 22½ cents in the grease, or 45 cents clean. A fair movement has been noted in eight-months' Texas wool during the month on the clean basis of 58 cents. Good twelve-months' has sold at 70 to 75 cents, though some are still holding at 80 cents clean for choice wool. Short clothing twelve-months' is quotable 65 to 70 cents. Some fall wool has sold at 52 to 53 cents clean.

Fleece wools have been rather quiet on the whole, as stocks are very much depleted. Prior to announcement of the Congressional tariff program, Eastern buyers were able to pick up some scattering farmers' clips in Ohio, and an occasional pool was also bought. Some of these wools have been arriving here lately and are being offered to manufacturers as fast as they can be graded. In most cases, however, they are held at prices above what manufacturers are ready to pay. For instance, an occasional lot of Ohio fine unwashed Delaine is held at 43 cents and above, while latest sales were at 40 and 41 cents, and one sale is rumored to have been made as low as 38 cents, though probably not strictly high grade.

Among the reported sales of Ohio and other fleece wools during the month have been Ohio three-eighths-blood combing at 30 cents, Ohio half-blood combing at 33 to 35 cents; Michigan fine unwashed Delaine at 36 cents; and Ohio quarter-blood at 29 cents for a choice lot. It is reported here that the Ohio pools have run up against a snag in the grading of their wools under Government auspices. According to experienced handlers of Ohio

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fleece wools, this official grading has resulted in what they call "mishandling." A case in point is the pool of the Harrison County (Ohio) Wool Growers' Association. This wool ranks among the best in the state, the offerings in the pool being about 248,000 pounds.

No bids were received, but three prospective buyers sent letters giving reasons why they could not bid. In at least two cases the ground was taken that grading showing only one-half of one per cent short clothing wool could not possibly be correct. Ten per cent clothing wool is regarded generally as the safe rule in handling these wools, varying, of course, with the different clips. The trouble was not the fact that the wools were graded, but that neither manufacturers nor dealers had sufficient faith in the grading to bid.

The end of March found all London and Australian auctions suspended for the moment, though April promises enough in volume to make up for any lack in March. An effort is to be made at the coming Australian auctions to bring the reserve limits into line with those in London. Offerings are to be heavy—110,000 bales in London in April, and probably about as much in Australia. No lack of wool is indicated. The policy of American buyers must wait upon tariff legislation in this country, though it is expected that a high tariff will stop buying for all but the very choicest grades of warp Merinos.

Among the importations of wool recently have been large lines of Bradford tops, which have been offered here as low as 68 cents a pound to arrive, or 72 to 73 cents on the spot. These prices are below cost, but not below replacement figures. The best 64's tops are being offered at 82 to 90 cents. All these figures are below what domestic topmakers can do. In a single recent week over a million pounds of Bradford tops changed hands in this market.

Shearing is reported to have been begun in Arizona, though operations have been greatly delayed by unfavorable weather. A little new wool has arrived here from southern Texas, but

not enough to cut any figure in the market. Large handlers of Arizona wools say that those who secured wool on consignment from that state last year are trying to get the same clips this year, in order that the over-advances may be adjusted without undue friction.

Rarely has so little interest been manifested in a new clip as this year. Manufacturers can get all the wool they need from the old clip, and consequently are not worrying. There is nothing in the situation to encourage speculation, except at very low prices, probably much lower than growers would be willing to accept.

The goods situation is not yet normal, though showing some improvement for the month. A fair volume of orders has been secured but manufacturers are disposed to proceed very cautiously, in order that they may not be caught with a large volume of cancellations, as they were a year ago. This brings considerable complaint from the wool trade, as dealers say that manufacturers are only covering a part of their needs, feeling sure that they can get all the wool they want, when they want it, and at their own prices.

WEATHER, WAGES AND LAWS IN WYOMING

March weather in Wyoming has been entirely lamb-like in its antics this year. Spring even made its appearance for several days, and grass began to show green. The last of the month is quite seasonable with temperatures just a trifle low but not damaging. If any criticism were to be made it is lack of moisture. There have been no storms but wind. But there is plenty time for rain and snow during the coming month, and there is not the probability of blizzards.

Sheep are naturally in the best possible condition. Both lamb and wool crops should be of the best quantity and quality. No clip was ever better grown, both as to staple and condition. As to market prospects, at this writing, "there ain't no such animal." We have been unable to learn of a

single sale of sheep in the central part of the state, and this at a season when ordinarily quite a number of bands change hands. The only transfers known are of herds taken over by creditors. There is no money nor credit available to transact business.

The organizations in several counties in the state have recently met and agreed on revised wage scales which are more in keeping with present conditions in the industry. The state association declares that the maximum wage for herders and camp tenders should be \$50 per month, lambing hands and inexperienced men, \$40, and ranch hands, \$35. This includes board. For shearing the generally agreed price is nine cents and shearer pay \$1 a day for board; some counties have agreed on ten cents. There is little objection on the part of employees, as most of them realize what sheepmen are up against, and labor is generally plentiful. These wages naturally vary some in different sections of the state, due to different conditions; some localities are already well below the maximum.

The legislature recently ended enacted few laws affecting the sheep business, but those were important. The first was to provide in the compulsory annual dipping law for the designation of a non-dipping district in any county in which the owners of two-thirds the number sheep assessed petitioned that such county should be exempt from the annual dipping.

The other law is a "Truth-in-Fabric" law requiring the compulsory labeling of all cloths or fabrics containing wool, stating the percentage of virgin or new wool contained. This is the first state to enact such legislation, and it is believed that its effects will be beneficial to both consumers and wool growers.

On March 31st, Nevada sheepmen and shearers were still some distance apart upon rates. The former talked 11 cents and the latter, 15 cents with board. Some shearers at Winnemucca offered to start for 11 cents but an Elko owner was reported to have engaged a crew at 15 cents with board.

March Sheep Market Review

MARCH ON THE CHICAGO MARKET

Live mutton trade went into April in somewhat demoralized condition so far as lambs were concerned. Sheep, which had been selling for a mere song, were scarce enough to ignore the course of the lamb market. March was a month of liquidation, Colorado feedlots disgorging and the cornbelt states delivering a lot of stuff they had not been credited with concealing. As usual, prior to Easter, a healthy demand for light lambs to substitute for "springer" product, put the 70@75-pound class in the specialty class, but the 100-pound lamb was always penalized and when the weight exceeded 105 pounds sheep prices were imposed. The trade was without special feature all through March except that most of the time packers were sparing buyers and had it not been for periodical displays of buying energy by Eastern killers, trading conditions would have been even worse. A little stuff was bought for export, but not sufficient to affect values. Much of the time Chicago packers were in easy circumstances with abundance of direct lambs from Denver, enabling them to stay out of the market until able to dictate terms or outside competition forced them to purchase.

In a statistical way the course of the market follows:

April 1 prices with comparison in recent years:

	Sheep		Lambs	
	Top	Bulk	Top	Bulk
1921	\$ 7.25	\$ 5.50@ 6.50	\$20.00	\$ 8.75@ 9.25
1920	13.50	13.00@13.40	20.25	18.00@25.35
1919	17.25	13.50@16.50	20.10	18.25@19.75
1918	17.00	13.75@16.25	20.30	16.75@20.10
1917	13.00	11.50@12.60	15.40	12.00@15.25
1916	9.25	7.25@ 8.25	11.40	9.25@11.25

Top and bulk for the period indicated:

	Sheep		Lambs	
Week ending	Top	Bulk	Top	Bulk
March 5	\$7.50	\$5.25@ 6.90	\$11.25	\$9.50@11.00
March 12	6.25	5.00@ 6.10	11.00	9.00@10.75
March 18	6.50	5.25@ 6.25	10.75	9.00@10.50
March 26	6.90	5.40@ 6.35	10.85	8.75@ 9.50
April 2	7.25	5.50@ 6.75	10.50	8.25@ 9.50

The First Week

The first week of March, 241,000 sheep and lambs reached the ten principal markets, against 178,000 a year ago. Shipping demand, which developed breadth the previous week, was impaired by a bad dressed market down East and some of the bloom put on during the last of February disappeared. Sheep and yearlings lost 50@75c; lambs, 75c to \$1 per cwt. On Tuesday, \$11.25 was paid for choice light lambs, marking high point for the month, but on Friday \$10.75 took the same kind.

At the close of the week the bulk of the wooled lambs sold at \$9@9.50, shorn stock averaging 97 pounds going at \$8. Yearling wethers dropped from \$9.50 to \$9, the 90-pound kind selling at \$8.75 on the close. Early in the week \$6.75 took good mature wethers, ewes reaching \$6.90, if on the handyweight order, \$6@6.50 taking the heavier kinds, but \$6 was an outside price for 115-pound stock before the close, choice \$103@106-pound stuff stopping at \$6.50. Supply of feeding lambs was limited, a few small lots going out at \$8.25@9.

Second Week

Shipping demand saved the day for the selling side during the second week as the run of direct stuff to packers from Denver was the heaviest of the season. The slump was checked Monday, prices picking up toward the end of the week when lambs, yearlings and wethers showed gains of 50@75c com-

pared with the low spot Monday, fat ewes gaining 25c. Packers and city butchers paid up to \$11 on Thursday for 80@87-pound lambs and up to \$10.50 for the 90-pound kind. Choice 82-pound shorn lambs reached \$9.60, similar stock weighing 100 pounds going at \$8. Bulk of the fat wooled lambs, not carrying excessive weight, sold at \$10.25@11. Choice handyweight wooled yearlings and wethers were scarce, the best yearlings averaging 98 pounds selling at \$8.50 and 105@110-pound stuff at \$8. Fat ewes averaging 111 pounds scored at \$6.25. Killers spurred by a healthy Eastern demand, took lambs that under normal conditions would have gone to feeders, although a few loads went to the country at \$8.50@8.75. The ten markets received 223,000 during the week, against 186,000 a year ago.

Third Week

The third week a run of 263,000 at the ten markets against 173,000 a year ago exerted a depressing influence. Light lambs lost 50@75c per cwt., heavier grades a dollar or more. Demand centered on light and handyweight lambs for Eastern trade, heavy stock being practically without a market. Choice 103@105-pound Colorado lambs sold at \$8 and 107-pound stock at \$7.75 against a \$10.75 top on light lambs. The proportion of shorn lambs increased, \$9.75 being paid early in the week, but later choice 88-pound stock had to take \$8.75. Good 92-pound wooled yearlings sold at \$8.25 and 101-pound stock in similar condition \$7.60, shorn 110-pound yearlings selling at \$6.50. Heavy wethers were as hard to sell as big lambs, a prime band in the fleece weighing 170 pounds selling at \$6.65 late against \$7.25 early in the week. Fat ewes were appraised largely at \$5.50@6, with a few handyweights at \$6.25. Ewes closed 75c lower for the week, wethers 50c lower and yearlings \$1 lower in sympathy with big lambs. A feature of the week was the sale of a band of light fleshed 38-pound spring lambs from Colorado at \$9.50, the top end being sorted off

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at \$10.50. Feeding lambs were scarce and in fair demand at \$8.75@9.25, a few pregnant ewes lacking quality going to the country at \$4.50@5.50.

The Fourth Week

During the week ending March 26, the ten markets received 221,000 against 155,000 last year. The light run exerted a beneficial influence on prices, sheep closing 25c higher; lambs 50@75c higher than the previous week. Colorados were in a decided majority, the heavy run from cornbelt feedlots disappearing. At the high point on Wednesday choice 80-pound woolled lambs reached \$10.85, the bulk of the fleeced lambs going at a range of \$9.75 @10.50, with heavy lambs at \$8.50@9.25, the 100-pound and over kind selling at \$8.25@8.50. One load of prime shorn lambs, 86 pounds, went to a city butcher for Eastern trade at \$10.20, but no other shorn lambs passed \$9.75. Shippers paid \$9.50 for shorn 75-pound lambs, a 90-pound kind going at \$8.35, and 100-pound shorn stock at \$7.40@7.50. Yearlings were scarce, a band of 800 prime 80-pound, Colorado-Mexican yearling selling at \$10.20. Matured wethers were too scarce to quote and only a handful of ewes was available, choice 110-pound female stock selling at \$6.50. Not enough feeding or shearing lambs arrived to make a market, \$8.75@9.25 taking the few available with a handful of pregnant ewes at \$5.25.

The short week at the end of the month witnessed renewal of demoralization. The first three days packers received 25,000 direct lambs from Denver with the usual disastrous results. Sheep and yearlings were scarce and held steady while lambs dropped 75c to \$1 per cwt., the \$10 quotation disappearing. Choice woolled lambs sold at \$9.75 and a class carrying a little weight at \$9.25, prime 78@80-pound shorn stock stopping at \$9.10, heavy shorn stock going at \$7.50 @8. Lambs in the fleece weighing 96-pounds had to take \$8 and 92-pound shorn yearlings \$7, a few shorn weth-

ers and ewes selling at \$6.25 and \$5.75 respectively.

Average prices by weeks for the current year:

Week Ending	NATIVES	WESTERNS
	Sheep	Lambs
Jan. 1	\$4.25	\$11.50
Jan. 8	4.10	10.90
Jan. 15	4.90	10.70
Jan. 22	4.75	10.25
Jan. 29	4.50	10.10
Feb. 5	4.00	9.40
Feb. 12	4.25	9.25
Feb. 19	4.20	8.80
Feb. 26	5.10	9.30
March 5	5.70	9.25
March 12	5.40	9.15
March 19	5.35	8.85
March 26	5.55	9.45
April 2	5.90	8.90
		6.25
		9.15

Highest March prices on sheep and lambs with comparisons:

	Sheep	Lambs
1921	\$ 7.50	\$11.25
1920	17.50	20.75
1919	12.00	21.00
1918	13.70	19.50
1917	11.75	15.70
1916	8.50	11.90
1915	6.85	10.10
1914	6.30	8.50
1913	6.50	9.15
1912	5.10	8.25
1911	4.75	6.65
1910	6.60	10.60
1909	5.85	8.30
1908	5.75	8.35
1907	6.00	8.15
1906	6.25	7.15
1905	5.85	7.85

THE OMAHA MARKET IN MARCH

Last month was another unsatisfactory period in the sheep and lamb trade. Trade has been unsettled, receipts fairly liberal for March, weights relatively heavy, and there seems to be a general lack of interest on the buying side of the market with the trend to values downward.

Most of the offerings at Omaha last month came from Colorado feed lots and the receipts for the month amounted to 208,661 head. Lambs predominated in the supply and on many days the display of fat sheep was almost too small to afford a test of values. Sheep shipments have been running largely to ewes. Colorado is credited with having shipped about 80 per cent of the sheep and lambs that were put on feed last fall.

Compared with a month ago present prices at this market are anywhere from \$1.25 to \$2 lower on fat lambs, and much of this decline was registered during the final week of trad-

ing. Fat sheep are about 25@50 cents lower for the month.

Good Mexican fed lambs are now selling around \$9.25 with the heavy fed Westerns down around \$8.75 and less. The customary dollar discount on shorn lambs has been observed by buyers and the few clippers coming are selling up to \$8.25 and \$8.50.

The percentage of shorn lambs in the receipts this year is much smaller than is usually the case during the early spring months.

Wooled ewes are quoted around \$5.50@6.25, although few have been selling above \$6. Heavy shorn ewes, on two or three occasions lately, were notched at \$5.

Owing to the fat character of the receipts and the slack country demand for feeders and shearers, the outbound movement from Omaha during March was limited to 7,463 head. Packers are taking over 95 per cent of the receipts at the present time, and prices for feeding and shearing stock show little material change from week to week.

Current quotations on sheep and lambs are about as follows:

Best fat lambs	\$9.00@9.50
Medium to good lambs	8.50@9.00
Plain and heavy lambs	7.50@8.50
Shorn lambs	6.75@8.50
Aged wethers	6.00@6.75
Good to choice ewes	5.75@6.25
Fair to good ewes	5.25@5.75
Cull ewes	2.00@3.00
Shearing lambs	7.75@8.50

KANSAS CITY MARCH MARKET

Kansas City Stock Yards—The March sheep market held out some promise of making a fairly good showing compared with the February price level, and for a time succeeded fairly well. Before the end of the month, however, the price position slumped, and failed only by 50 cents of reaching the low point recorded the middle of February. At the high point choice lightweight lambs sold up to \$10.75, and on the close \$9.25 was the highest price paid. Some strong weight lambs made \$10 to \$10.25, but on the close they were under the nine

dollar mark. Weight predominated in the supply the entire month, and the fluctuation in prices of sheep was much smaller than for lambs. Yearlings were relatively better sellers than lambs and in many cases killers preferred yearlings to heavy lambs.

One feature in the trade during the month was the absence of demand for stock, feeding and breeding grades, and the unusual per cent that went into killers' hands. Local killers during the month bought 95 per cent of the total offerings, and the kill on the local market in March was the largest in the third month of the year for the past eight years. In normal years March develops a big demand for breeding ewes. In the first three months of 1920, Texas took 12,719 ewes from the Kansas City market and in the same period this year that state took only 614 head. Texas was restocking a year ago, and now she can meet her own requirements for a time. Cornbelt breeders have sold thousands of fat ewes in the past five months and have not restocked this spring so it is reasonable to suppose that in less than a year farmers in the Central states will be wanting good young ewes in liberal supply. The market for fed lambs carried such a poor prospect that there was practically no demand for feeding lambs, and it is safe to say that 98 per cent of the lambs that went into feed lots are finding their way into shambles out of first hands.

Fat ewes on the close were quoted at \$5.25 to \$6, and at no time during the month were they above \$6.50. Yearlings closed at \$7.25 to \$8.25, and wethers \$6 to \$6.75. Both clipped sheep and lambs maintained about a dollar margin under woolled grades.

March receipts were 151,500, compared with 147,926 in the third month last year, 133,020 two years ago, and 114,842 three years ago. The month's receipts were about as expected, though had it not been for a strike threatened by packing house labor about the middle of the month the runs would have been materially larger.

C. M. P.

SHEEP AFFAIRS AND WASHINGTON STATE LEGISLATURE

Opposition by retail trade bureaus of chambers of commerce of the state defeated the "Truth in Fabrics" legislation which was before the Washington state legislature at its recent session with the backing of the State Woolgrowers' Association and the Spokane Stockmen's Club. The Washington State Retailers' Association also opposed the bill, its president, George A. Phillips, issuing a statement in which he asserted that if such a law became effective, distribution of fabrics would be almost impossible in this state. "If pure fabric legislation is desirable it can be justly and fairly handled only by the Federal government," he said. "Enactment of dangerous and discriminatory local legislation, without other states doing likewise, would accomplish none of the purposes sought by the bill, would raise the price of fabrics to consumers, might prevent the local sale of any fabrics manufactured in this state, and would seriously embarrass national manufacturers now sending goods into this territory." The wool men sought enactment of the measure merely as temporary relief until national legislation on the subject could be obtained.

A bill indirectly affecting sheepmen which became a law was that providing for payment by county auditors of counties, in which itinerant sheep are assessed, of part of the taxes on the animals to the county in which they are grazed in summer. The act passed after a sharp fight against it by representatives of a dozen southeastern Washington counties where about 500,000 of the sheep assessed in this state are owned. The legislature enacted and the governor approved a deficiency appropriation of \$10,000 for the state fair and a \$40,000 appropriation for maintaining it during the biennium; this, in spite of the executive's recommendation at the beginning of the session that the fair be discontinued. The legislature appropriated \$20,000 to be awarded in prizes at the Western Royal and \$10,000 to

be divided as last year among Washington exhibitors at the Pacific International, but the governor vetoed the items on the general grounds of economy and the special ground that because the state fair was allowed only \$40,000, it was unfair to set aside large sums for other shows.

G. N. Angell.

WYOMING ASSOCIATION TO FURNISH WOOL GRADERS—WAGE RATES

The following announcement has been sent out by Secretary J. B. Wilson to members of the Wyoming Wool Growers Association:

This association has now in their employ a thoroughly competent wool grader. He has had years of experience in grading at woolen mills, dealers' warehouses and at the shearing sheds.

Our grader will be able to do a limited amount of grading at the shearing pens this year. We are now preparing his schedule and if you are desirous of having your wool graded, please sign and return the enclosed card at once. The cost will be the actual wages of the grader, plus traveling expenses, but in no case will this exceed $\frac{1}{4}$ c per pound of wool.

We think everyone is agreed that it pays to grade wool at the shearing pens.

At our last convention in Casper, it was decided to have the association handle the pelts of its members, cooperatively. We are quite sure that by thus handling the pelts, the grower will receive more money for them. He will be assured of absolutely honest grading and honest weights.

On account of the stagnant condition of the pelt market, it has been decided not to start handling the pelts until June, at which time we have every reason to believe the market will be higher than it is at present.

We earnestly urge all our members to hold their pelts until they hear further from us.

Your executive committee has fixed the following scale of wages:

Herders and camp tenders, maximum of \$50 per month.

Inexperienced lambing hands, \$40 per month.

Ranch hands, \$35 per month.

Ranch hands where they board themselves, \$60 per month.

For shearing, 10c per head; shearer

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to pay \$1 per day board.

Your committee gave these matters careful consideration and believe the scale adopted is all that we can afford to pay, and we earnestly urge all of our members to conform to this scale.

In several counties of the state, herders' wages have already been reduced to \$50 per month.

All of our products are selling on, or below, the pre-war level and, if we are to continue in business, all expenses must be cut. When the first reduction in herders' wages was announced last fall, there were a great many flockmasters who felt it would be impossible to make a reduction. Yet, practically all sections of the state have made reductions of from 25 to 40 per cent and there has been very little trouble in putting these reductions into effect.

In Carbon County the following scale has been fixed:

Old herders, maximum, \$65 per month.

New herders, maximum, \$50 per month.

Shearing, 10c; shearer to pay \$1 per day for board.

In Converse County the following scale has been fixed:

Herders, \$50 per month.

Lambing hands, \$40 per month.

Shearing, 9c; shearer to pay \$1 per day for board.

At a meeting of the Big Horn Basin Wool Growers Association, at Lovell on March 3-4, the following scale was fixed:

Herders, up to July 1st—\$60 per month.

Herders, after July 1st—\$40 to \$50 per month.

Irrigators—not to exceed \$60 per month.

Shearing—11½c, shearers to board themselves.

Bucks—double string.

Head wrangler, sackers and tiers at shearing pens—\$3 per day and board.

Wranglers and wool wrangler—\$2 per day and board.

We believe that if all wool growers will adhere to the scale of the executive committee, there will be no difficulty in putting it into effect, as all of our neighboring states are making similar reductions.

WOOL RATES TO BOSTON BY WATER ROUTE

The present railway freight rate on sacked wool from Salt Lake to Boston is \$3.03 per hundred.

The rail rate to San Francisco is \$1.50 and steamship rate from there to Boston is 90 cents. The handling charges, canal tolls and insurance amount to about 10 cents or a total charge of \$2.50 per hundred from Salt Lake to Boston. From three to four weeks are usually required on the water route.

From points between Salt Lake and the coast the rate would be correspondingly lower. Representatives of the steamship lines are looking for this business and state that sufficient space and good service are assured.

A TEXAS NOTE

Some short wool has been sold in this section at 15½ cents per pound. I have not heard of any sales of long wool, nor of sheep. I think, however, that good sheep are selling at about \$8 to \$10—the same kind that brought \$15 to \$30 last spring.

The fall lamb crop was a failure, but the spring crop will be very good, as most of the sheep wintered well. This is especially true of sheep that were sheared last fall, which is a good practice in this section. Owners agreed to pay from six to eight cents for shearing.

H. M. Wendel.

Harper, Texas.

WESTERN NEVADA COUNTY

Winter conditions have been favorable along the Nevada-California line. There has been a fair amount of snow and a few storms, but lighter losses than for many years. In 67,000 head run by the Pyramid and Nevada Land and Live Stock Companies losses have been fewer than 700 head.

Shearing opened up during the last of March along the Southern Pacific. A few small lots were shorn by resident shearers working near their homes at 10 cents per head. Some regular outfits contracted their work at 12½ cents, but some recent engagements have been on a 15-cent basis.

The snows and cold days of April 5 stopped shearing that was getting under way in the Elko country. Some

Eastern wool men are on the ground, but no business has been done so far.

G. W. Callahan.

Reno, Nevada.

A SETTLED POLICY WANTED

This has been the mildest winter since the memory of man knoweth not to the contrary. Grass was plentiful and unusually well cured. Up to date we haven't fed a spear of hay or grain of any kind, and don't figure on having to; and sheep are in excellent shape.

The outlook for wool is as black as night. The business of raising wool can never be a stable, dependable industry until the politicians cease to make a sport of it, and make up their minds whether it is an economic asset or a liability. An industry cannot alternate between tariff and free list with every change of administration without bringing ruin on those engaged in it, and heart-burnings to the bankers who have the courage to back the wool growers. One thing is certain in Montana: with wages and taxes and land values what they are, we cannot raise free wool and compete with the foreign product, any more than the American Woolen Company could compete with the mills of Leeds and Bradford on a basis of unrestricted importation. Graham & Maclean.

Conrad, Montana.

The Mississippi Delta Cotton Export and Trading Company has shipped 20,000 bales of cotton to Germany and Czechoslovakia and holds contracts for 100,000 additional bales. Under the arrangements of the sale the foreign mills obtained this cotton without a deferred payment. The growers received negotiable trust receipts on which the banks loaned money. The foreign mills were allowed one-third of the cotton received in return for manufacturing the other two-thirds. The goods are sold in Europe by the association's representatives there and the proceeds returned to the members.

SHEEP LEGISLATION IN IDAHO

Appreciating the fact that the wool growing industry means much to Idaho, and that times have been hard with the wool growers with little prospect of improvement, the Idaho legislature, just adjourned, treated the business very kindly.

House Bill 110 creating a Board of Sheep Commissioners, and appropriating \$35,000 for expenses passed both houses and received the assent of the governor early in the session. This act provides for a board of five wool growers, who appoint, with the consent of the governor, an inspector in charge who is directly responsible for the health of the sheep within the state. Fred W. Gooding, Andrew Little, B. Thomas Morris, C. C. Clay and Hugh Sproat are the present members of the board, and Dr. J. H. Dade has been appointed chief inspector.

It may be of interest to wool growers to know that this board has decided on the lime-sulphur dip as being the only dip allowed for scabby sheep within the state. A careful inspection has been made and all exposed and dipped bands will be carefully inspected from time to time during the summer months. Conditions are better already than was hoped for, and co-operation of the wool growers with the board will result in a speedy clean-up of scab within the state. One or two instances of breaking quarantine have been reported and the matter is now in the hands of the county attorney of the county where such violations occurred.

House Bill 229 makes it compulsory to have the name of the country of origin stamped on all imported meats, eggs, poultry and butter, and to display a sign, in a conspicuous place, carrying this inscription, "This store sells imported meats, etc."

House Bill 226 provided for co-operation with the U. S. Biological Survey, appropriating \$20,000 from the Predatory Animal Fund, \$10,000 from the Game Fund and \$10,000 from the General Fund, and was vetoed by the governor after passing both branches of the legislature. The above amounts

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were for the biennium. The governor was not so much concerned about getting rid of the predatory animals as he was of the curtailing of the operations of his Department of Agriculture.

Senate Bill 276, also passed by both houses, was vetoed by the governor. Its most important provision was giving the power to the Sheep Commission to use the predatory animal fund for any purpose it may deem necessary and proper to encourage the destruction of predatory animals. The governor was not loath to say that bill gave too much power to the Sheep Commission. As the wool growers pay about two-thirds of the predatory animal taxes, at least one member of the board is not at all loath to say if the governor has no more faith than appears from the above in the Board of Sheep Commissioners, he should change its personnel.

Senate Bill 296 requiring all fabrics, articles, yarn or clothing of any kind, or cloth containing wool or purporting to contain wool, to be stamped, labeled or tagged thereon in a manner that shall be legible the following information: name of the maker and percentage of virgin wool contained therein, passed the senate, but failed to get past the sifting committee of the house in the final hours of the session. The retail dealers "got busy" and blocked the bill. Had it reached the final reading, it is thought the house would have passed it.

House Bill 234 placed caretakers of livestock among those engaged in agricultural pursuits, and consequently not coming under the workmen's compensation act. This allows the wool grower to insure his men or not, as he chooses. By reason of the many abuses experienced when the insurance act was compulsory, this legal classification of employees is a considerable relief to wool growers.

A decision by Judge Varian in Washington County, has already placed sheepherders among agricultural laborers, but the definite placing of them in that class by the legislature has put an end to much litigation in prospect.

Hugh Sproat.

THE CALIFORNIA DOG LAW

One of our readers has requested information on the California dog law as it affects the sheepmen. For him and any others who may be interested we print the following from Professor James F. Wilson, University Farm, Davis, California:

The clauses in the California dog law, which are of interest to the sheepman in this state, are as follows:

"The owner or owners of any dog or dogs which shall worry, wound or kill any sheep, cashmere or angora goats, shall be liable to the owner or possessor of such sheep, goat or goats, for the damages and cost of suit, to be recovered before any court having jurisdiction in the case."

"Any person finding any dog or dogs, not on the premises of its owner, worrying, wounding or killing any sheep, or cashmere, or angora goats, may kill the same and the owner thereof shall sustain no action for damages against any person so killing any dog or dogs under such circumstances."

It will be readily seen that the present law is but little better than no law at all, since the dog that kills or worries sheep usually commits his crime under cover of darkness and is seldom caught in the act.

The California Legislature is now considering a bill which would modernize the state dog law and provide remuneration to sheep owners suffering damage from dogs. At this writing the bill has passed the senate. Previous efforts to pass similar improved statutes have met defeat at the instigation of people harboring the mistaken impression that a good dog law works a hardship on the owner of a good dog.

February receipts of sheep and lambs at 68 markets were 1,516,000, or 7.4 per cent more than in February, 1921. The receipts for January and February were 9.7 per cent more than in 1920. Of the 1,516,000 received in February, 929,638 were slaughtered at the points received. This number was 118,000 more than a year ago.

April, 1921

APRIL SPLITS THE WOOL

Many sheep feeders have come to early April in hopes that market conditions would have been adjusted to a better price level. Some of the weighty lambs have begun to split and slip the wool and the bulk of them still in feed lots have reached a weight where further gains are hard to get on full feed. Many are shearing, and some are still holding back. The remaining supply in feed lots will be cleared this month, but because of an ample number in sight, the late April market will probably show no improvement over the March trade. Viewing this year's feeding operations, together with the big financial loss incurred, the sheepmen this month feel like singing that old hymn, "Wake, for the Long, Long Night is O'er."

The Arkansas Valley and Fort Collins districts in Colorado will about clean up feed lots in the first twenty days of April. Western Nebraska is already about through marketing and the San Luis Valley cleaned up the first half of March.

Arizona has a good per cent lamb crop. California will have to find an outlet for some of her surplus at central markets, and the number of Texas grass fat sheep and lambs marketed will depend on weather and range conditions for the next thirty days. Southern spring lambs will hit the Louisville and Chicago markets in June.

Taking it all in all, a gloomy outlook seems to be sticking around. Notwithstanding the pictured gloom, there is a big factor that will dispel it, at least one that has been able to do so on previous occasions, and that is none other than the actual grower himself. These are not the worst nor the most discouraging times ever known to sheepmen, and previous trying times have been met and rounded to. Sheep and wool production remains and will remain a basic industry. It's only when finances begin to slip and split like the fleece on full fed sheep in April that it looks like sheepmen have the most unpromising prospects in the history of the industry.

C. M. P.

MARCH WEATHER ON WESTERN RANGES

By J. Cecil Alter

The following summary of weather, livestock and range conditions has been prepared from the various publications and reports of the United States Weather Bureau.

UTAH—Abnormally mild weather prevailed, with only a few minor cold spells, the month being favorable on stock in this respect, especially on the sheep that were lambing early. There were a few rain and snow storms, which were ample in northern sections, but desert moisture supplies were depleted by the warmth, especially in central and southern sections. This, with the coming of new grass unusually early, has caused considerable activity among the stock. The condition of the ranges and both cattle and sheep are reported fairly good in all sections. A slow but gradual movement from the more remote winter ranges continued most of the month. Goat shearing began in Kane County early in the month, and sheep shearing preparations were being made in many districts near the close.

NEVADA—Mild weather prevailed through the month in the southern portion, and during the first two weeks in the northern portion. Grass made an early start with the disappearance of the snow from the valleys, and was flourishing in the southern portion, though stock moisture there was becoming scarce. In the western sections the range grasses need moisture because of a dearth of soil moisture. Cattle and sheep are still being fed in the northern portion, and shed lambing and some shearing were reported of late in the western portion.

IDAHO—March was mild and only moderately stormy, excepting only the last week or ten days, when it was colder and more blustery, especially in the panhandle district. Vegetation came on much earlier than usual, and pasture grasses at lower levels were doing nicely and affording more or less feed. Lambing operations were particularly favorable, the stock being in good or excellent condition, and the

increase amounting to as much as 130 per cent.

MONTANA—At the close of March livestock and range conditions were very good. Grass has begun to grow, even in the northern counties, and the moisture in the soil is plentiful, but stock water is scarce in a few places. The winter livestock losses have been small because of the mild weather. There has been some early lambing, the lambs being vigorous and no losses were reported.

WYOMING—Comparatively mild weather prevailed, with timely and rather well distributed precipitation, though the moisture was light, especially in eastern counties. Grains and the range are thus in need of moisture in these sections. The winter range was open practically all month, and averaged fairly good, though becoming short in many localities. New grass has appeared quite generally though it is still too short to furnish much feed. Some shed lambing was reported locally in the southeastern counties. Sheep and cattle are in good or excellent condition, and the winter losses have been unusually light.

COLORADO—Moderate temperatures have proven favorable for stock, and feed on the available ranges has been ample, with accessible moisture. The sheep and cattle are now in good or excellent condition. The snow has left the lower valleys and mesas, and range grass is starting nicely. The range grasses need rain badly in some extreme eastern counties, and farm lands are comparatively dry in some northern sections.

WESTERN TEXAS—Moisture over the ranges has continued abundant, and new grass is making a good showing generally. Feed is reported fair to good, and there has been less feeding of stock than for many years at this season. Cattle are mostly in good condition and doing well. Cold, wet weather in the last week was rather hard on the few young calves that have appeared.

NEW MEXICO—The month's temperatures have not been hard on stock, and moisture in the form of rain or snow has been rather well distributed

and ample for the soil and livestock, especially during the later part of the month. The range, however, has been poor or only fair through the month, and stock as a rule have not done well; they are in only fair condition generally, and good locally, though the range is improving rapidly and stock are gaining.

ARIZONA—Mild weather has prevailed, and there has been some good rains and snows which were greatly needed. Spring browse and grasses over the lower levels generally are making good growth, and with moisture conditions improved the general situation is on the mend. However, stock have had a hard winter and are in much poorer condition than a year ago owing to an unusually short range. Feeding continues locally and losses are still reported. Sheep are so poor that movement to summer ranges is a serious problem, particularly where feed is scarce, and the loss of many ewes and lambs is reported.

CALIFORNIA—March was a good month in California. Temperatures were uniformly mild, or above normal, and moisture was timely, rather well distributed, and abundant. Pastures and meadows became green early, and have made good progress. Alfalfa was nearly ready to cut in some southern sections. Livestock are in excellent condition, and lambing was well along, having progressed very favorably.

OREGON—March was unusually wet and stormy, with considerable cold weather. Details are lacking, but there is no report of unfavorable conditions among livestock. Pastures are good, and while spring growth has been slow, due to low temperatures, the excessive moisture gives promise of splendid growth with the advent of warmer weather.

WASHINGTON—Moderately cold weather with frequent and fairly heavy rains and snows has provided abundant soil moisture and caused some high water in the streams. Growth of vegetation, including spring grasses and the grains, has been rather slow due to low temperatures, but in general quite satisfactory, and pastures are reported good.

NEVADA AND CALIFORNIA CO-OPERATE TO CLEAN UP SCAB

That the scabies situation in the states of California and Nevada is extremely serious and can be controlled only by the concentrated effort of stockmen, state and Federal bureaus, is the statement made by Paul G. Reddington, district forester of the U. S. Forest Service. At a recent meeting of the interested departments, the following plan was agreed upon:

In order to eradicate the scabies California and Nevada will co-operate to the fullest possible extent. Nevada inspectors will be deputized to exercise their authority in California, and vice versa. A similar arrangement will be in effect between California and Oregon. Particular attention will be given that part of California including the recent addition to the Modoc National Forest, where sheep come into California from Oregon.

Federal and state inspectors will pass on all the sheep to be grazed within, or trailed across, the National Forests in this district. All Forest Service sheep permittees must present a certificate from either a Federal or state inspector showing that their sheep are clean before they will be allowed to enter the National Forests. If the sheep are clean certificates "good for admission to the National Forests" will be issued by both state and Federal inspectors. Sheep which cross the National Forests must be accompanied by a certificate.

Sheep exposed after dipping or inspection will be refused admission to the National Forests until they can be inspected and passed.

Sheep which develop scabies after they enter the Forests will, if possible, be isolated pending proper dipping.

J. H. Patrick has delivered a shipment of a foundation breeding flock of Romneys to a Hopland, California, breeder.

SOME SALES, MARCH 31

March closed with the top price for choice handyweight lambs at Missouri River markets holding around \$9.25, and Chicago making a top of only \$9.50 for some 79-pound lambs. Some sales in Kansas City the last day of the month were:

L. B. Carter, Las Animas, Colo., 252 lambs, 78-lb., \$9.25.

Pittman Bros., Las Animas, Colo., 252 lambs, 91-lb., \$9.

Sol Benjamin, May Valley, Colo., 520 lambs, 81-lb., \$9.20.

England & Maxwell, Lamar, Colo., 496 ewes, 82-lb., \$8.85.

J. Greenwalt, Ft. Collins, Colo., 453 ewes, 93-lb., \$8.40.

Lindell, Brush, Colo., 383 ewes, 93-lb., \$8.40.

David Hamm, Rockyford, Colo., 474 ewes, 97-lb., \$5.90.

The above sales show fairly well the position of the market and that it closed in the lowest level of the month.

C. M. P.

SUGAR BEETS LOWER

This year the Great Western Sugar Beet Company operating in western Nebraska, Colorado, Wyoming and some other Western sections, established the price of beets at \$7 a ton. Last year the contract price was \$12 a ton. With the lower price for beets labor per acre has been reduced from \$30, where it was last year, to \$25 this year. Opinion is uncertain as to whether as many beets will be planted this year as last, which was the largest acreage on record, but there is evidence that this summer's acreage will be considerably above peace time proportions.

The relation of the sugar beet crop to the sheep industry lies in the fact that considerable rough feed is available for sheep feeders from the sugar beet, and a big beet crop generally indicates big feeding operations. Sheep feeders in the irrigated sections this fall will have the advantage of both cheaper feed and lower labor prices.

C. M. P.

April, 1921

THE NEW ZEALAND SLAUGHTER OF SHEEP AND LAMBS

The rise and fall of imports of lamb into the United States gives a special interest to the regular slaughter and exports of lamb and mutton from the two islands, (North and South) which make the Dominion of New Zealand.

The number of sheep slaughtered, carcass weights, together with the exports of mutton for the past six years, appear below. The years are reported as ending March 31, at which date all stock to be sold as lamb and most of the mutton had been slaughtered.

SHEEP SLAUGHTERED FOR FOOD PURPOSES

Year	Number	Weight	No. Frozen Carcasses exported (60 lbs. per carcass.)
1914	4,019,831	2,153,570.00	2,557,639
1915	3,999,460	2,139,889.00	2,552,448
1916	4,018,578	2,152,809.00	2,939,611
1917	3,601,284	1,929,259.00	2,409,899
1918	3,631,344	1,945,363.00	2,150,505
1919	4,381,005	2,346,967.00	1,300,047

LAMB SLAUGHTER

Year	—Lambs slaughtered for food—		—Carcasses frozen lamb export—	
	Number	Weight	Number	Weight
1914	4,338,180	1,394,415.00	3,854,348	1,186,538.00
1915	4,471,861	1,597,093.00	3,692,003	1,120,682.00
1916	4,091,085	1,314,991.00	3,750,590	1,152,736.00
1917	3,431,943	1,103,125.00	2,797,290	838,569.00
1918	2,695,443	886,392.00	2,048,612	623,022.00
1919	2,950,316	948,315.00	916,914	277,822.00

In addition to the above the farm slaughter for the 12 months ending March 31, 1919, consisted of 617,000 sheep and 56,000 lambs. New Zealand country folk prefer mutton to lamb.

The lamb slaughter in 1918 and 1919 was very low, due to the congested condition of the cold storage plants. The number of sheep killed in those years was more nearly normal as it was desired to get rid of the older stock first. The low rate of exports since 1916 was not improved until 1920, for which year the figures will no doubt be largest on record.

The rate of slaughter to the total number of sheep kept is one to three, or about 7 million for 24 million head shorn each year. In the United States there are about 37 million sheep shorn annually, with a slaughter of 12 million sheep and lambs.

ANOTHER HEARING ON MINIMUM CAR WEIGHTS

Hearings were held in Chicago by the Interstate Commerce Commission on February 6 upon the question of minimum car weights for livestock shipments. The principal topic was the weight that should apply to mixed cars from Eastern territory. The National Live Stock Shippers' League asked that in cases of mixed cars of sheep and hogs, the weight for sheep should apply. The roads objected that this would permit a shipper to add one sheep to a car of hogs and thereby re-

IDAHO BRIEFS

By Hugh Sproat

Idaho's early lamb crop, for the number of ewes bred, is the best in percentage and condition in the history of the state. Favorable weather and feed conditions have given the lambs a start that only a prolonged spell of bad weather will offset.

Southern Idaho is today (April 3) in the grip of a severe blizzard for the time of year, and bands just beginning to lamb may experience some losses.

The daily papers a few days ago carried the headline, "Boston Wool Buyers Operating in the West." Uh-uh, wonder if buying wool is a speculation this year. Oh, no, it is a cinch at the prices offered.

Idaho with three senators, two of them wool growers, Gooding and Stanfield, expects a tariff imposed on the clean content of wool—not on the grease pound which in imported wools shrinks 25 per cent, compared to 65 to 70 per cent of the domestic fine wools.

We don't know Cameron of Arizona, but his name sounds "good."

President Taft said that "Schedule K" in the Payne-Aldrich tariff was indefensible. When the coming permanent tariff act is passed, the wool growers will expect protection for their raw material equal to the finished product of the manufacturer.

When one mentions New Zealand lamb, it "riles" the wool grower.

Idaho wool growers have made arrangements with Coulter and Hoppel, attorneys of Weiser, to handle claims against transportation companies for them. This firm has been exceptionally successful in handling claims for individuals. They are now preparing a form for a complete record of shipments of sheep and lambs. Wool growers may obtain copies of the forms by addressing the above firm at Weiser, Idaho.

Ask your local dealer to carry the manufactures of the Bishop Mills of Oregon and Washington, the Provo Mills of Utah, and the La Porte Mills of Indiana. These factories guarantee their products to be free from shoddy.

April, 1921

CULLING AND SELECTING FOR HEAVIER FLEECES

(Continued from page 18.)

year continue to produce throughout life fleeces that are relatively heavy?" If the heavy shearing sheep this year is more likely or just as likely as not to be the one that produces the light fleece next year, then culling is not going to get us anywhere. I am fortunate to have a few figures available that will give an answer to this question. They do not cover nearly as large a number of cases as one would like, yet for the cases available, the answer is very definite. The figures are the weight of scoured wool produced by each of 29 Rambouillet wethers during each of four consecutive years. In age they were part two's and part three's at the beginning of the experiment, when they were selected for their uniformity of size and fleece. The first fleece sheared from them was about one year's growth of range wool. After an interval of six months, they were sheared again, the fleece not being counted in the calculations that follow. They were then put on a ration experiment in which there were radical changes of feed each of the three succeeding years. The fleeces for each year were scoured separately.

Now it would seem that this would be a case where the natural variation would offset any effect of selection, for there was but very little difference in the fleeces to start with, the sheep were all breed alike,—an entirely different case from one where part of the flock is made up of cross-breds of good blood and part mongrels of light-wooled breeds. Furthermore, these sheep were changed from the range to a dry lot, and their rations were changed from straight native hay to native hay with eight-tenths of a pound of oil cake. It might be expected that some sheep would thrive best under one environment and some under another entirely different. There was a period of six months between the fleece grown on the range and the beginning of the growth of the first fleece inside the feed yard, so that any

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temporary good or bad state of health would not have the effect it would if the second fleece started to grow as soon as the first one was removed.

In spite of all this, the results showed that the sheep that produce the relatively heavy fleeces one year continue to produce relatively heavy fleeces during the succeeding years. By methods that have been proved to give reliable results in other fields of investigations, I found that the relation between the weight of fleece produced on the range and the average weight of the three fleeces produced in the feed-yards, was such that a fair sized group of sheep shearing one pound above the average the first year would have produced during each of the three succeeding years about one-half pound above the average; that is, the effect of culling is about half what it would be if there were perfect correlation. However, the correlation between the fleeces obtained the first year in the feed-yard and the two years succeeding is more nearly parallel to the case where the sheep are sheared and run on the same range year after year. In this case, it was found that the correlation was such that a group of sheep one pound above the average the first year would have produced an average annual fleece three-fourths pound above the average of the two succeeding years. This lack of perfect correlation cuts down the effect of culling to a considerable extent. Yet, if the facts obtained from this experiment are typical of range sheep in general, we may count on the proposition holding true that at least half the increased weight of fleece due to culling will be held year after year throughout the life of the sheep. This does not mean that such correlation will hold true for each individual sheep, but only for the average of fairly large groups. This lack of perfect correlation may seem to defeat the purpose of culling but one should remember that all improvement of livestock by means of breeding is based on correlations between parent and child, that are, on the whole, very much less than that between the fleece weight of one year and that of the two or three succeeding years.



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April, 1921



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The second important question in relation to culling sheep is, What is the most practical way in which to find the profit losers in order to eliminate them? Any one who is familiar with the hurry and rush at the places where even comparatively small bands of range sheep are sheared, will understand that it is not practical in the shearing pens to weigh the fleece and mark the ewe for culling if the fleece is light. With a crew of weighers and markers small enough to keep the expense within reason, the identity of the ewe that produced the wool is almost certain to be lost before her fleece can be weighed. Even if it were possible to do so, culling on the basis of weight alone would be inadvisable for, in some instances at least, a light fleece is worth enough more per pound to make it as valuable as a comparatively heavy one. To my mind, the best method of culling is to have work done at a convenient time shortly before shearing by some one competent to judge the value of the fleece on the sheep's back. By looking over a sheep, one can tell the length, density and completeness of covering, these together with the size of the sheep will determine the quantity of clean wool. Also, the length and fineness can be determined just as well on the sheep's back as anywhere else, and these are the main factors in determining the value of a pound of the clean wool. It is not likely that this method is 100 per cent accurate, and I am sorry to say that I have no figures for any flock to show the difference in value between the sheep I have marked for culling as compared with the ones that I have advised the owner to keep.

Here is one experiment that shows what it is possible to accomplish by culling fine woolled sheep on the basis of length alone. Last year I was at a shearing shed where the wool was being graded and I weighed about forty fleeces from the fine combing bin and an equal number from the fine clothing bin. The only difference between the two was that the combing was $2\frac{1}{4}$ inches or longer and the clothing was

shorter than $2\frac{1}{4}$ inches. The average weight of the clothing fleeces was 10 pounds and of the combing fleeces, 11.7 pounds. That is the sheep that grew the combing wool produced on the average about one and three-quarters pounds per fleece more than the ones that grew the clothing wool. But the difference in weight does not tell the whole story of the difference in value. On the basis of scouring tests made on similar wool from the same part of the country, I estimated the shrinkage to be 64 and 68 per cent for the combing and clothing respectively. Using the Boston quotations of 85 and 65 cents respectively as the present value of these wools, on the scoured basis, and allowing a difference of 5 cents per pound in the grease between the Boston quotations and the ranch value, it is found that on the present market, value at the ranch of 10 pounds of clothing wool is \$1.60 and of 11.7 pounds of combing wool is \$2.98. Therefore, I maintain that so far as those particular sheep were concerned, one could have taken a measuring stick with a mark $2\frac{1}{4}$ inches from the end and by means of it have divided them into two groups so that the average value per head of the wool from one group would have exceeded the average value of the wool from the other by \$1.38.

There are certain things to be taken into consideration besides the actual value of the wool on the sheep. One of these is age. I have shown you in Table I that yearlings grow much lighter fleeces than mature ewes. On the other hand, old age in a sheep reduces the weight and length of the fleece. Hence, one has to use judgment and not cull out an old ewe that might produce a heavy shearing lamb. But no matter what a grand record a ewe may have made in the past, if she gets so old that she produces only four or five pounds of clothing wool, she should go into the discard unless there is a very strong reason to the contrary. The burden of proof should be on the ewe. In this connection, I will mention the tendency among sheepmen to try to excuse the ewe that car-

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ries a light fleece. "She was sick" or "she didn't thrive very well last year." Well, unless she broke a leg or had some other misfortune distinctly temporary in nature, it is probable that her illness or lack of thrift was due to a weak constitution. For she must have had pretty much the same chance as her sisters of the same age.

In conclusion, I will say that I do not wish you to get the idea that these few experiments settle the whole question of increased wool production. But insofar as the results obtained from the small numbers studied are typical, they show that there is a wide variation in the fleece weights of sheep in the same flock as ordinarily run on the range so that by culling the worst of these, it is possible to have sheep with an average fleece weight measurably higher than that of the original flock. The experiments show that sheep which are heavy shearers when young tend to be heavy shearers throughout life, so that the effect of culling one year will be felt at least throughout the life of the sheep in the flock. Finally, experiments have shown that so far as fine wooled sheep are concerned, one can get rid of most of the low producers by culling those that grow clothing wool.

I hope the facts I have presented to you will cause some action on your part. I shall be very much disappointed if you say, "Well, he made a pretty strong case" and then go home and forget all about it. If you believe the facts mean what I think they do, make arrangements to cull some of your worst sheep this spring, that is, mark them before shearing so that they can be culled in the fall.

If you are not convinced that culling will pay, or think your sheep all shear pretty close to the average, weigh a hundred fleeces, recording the weights according to my instructions. I should be very thankful if you would send me the results. At the same time, study your sheep until you can tell a ewe that is only producing five pounds of wool a year any time you see her. If you get so you know these star boarders when you meet them, it will take a state law to keep you from culling.

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THE UTAH WOOL PLAN

(Continued from page 14.)

Pleasant, Utah; George Austin, Salt Lake City, Utah.

"We have been, we consider, very fortunate in securing the services of men of the standing represented in this committee. These men have been induced to accept the great responsibility and labor of serving upon this committee and have consented to do so without compensation and purely from a sense of duty and desire to help an industry which is now in more or less distress. The situation requires concerted, immediate and careful action on the part of the grower and the committee. The men serving will serve you as they would serve themselves, and that service can be obtained without the expenditure of other than the actual and necessary expenses needed to carry on the work. The bonded warehouses in which this wool will be stored will be inspected and checked by the U. S. Government monthly, and every precaution will be taken by the committee to safeguard the interests of the grower and secure for him the highest possible net return for his wool. The general expenses of handling the wool, exclusive of freight, will be approximately the rate heretofore charged by established warehousing companies.

"Information concerning the plan is being sent out to the banks of the state by the Utah Bankers' Association so that your local bank will be in possession of further details. There is being mailed to your county agent copies of the agreement or power of attorney under which the committee proposes to handle the wool and you should call at his office and the office of the Utah State Wool Growers and get a copy of the same and properly execute and return it to the committee, 510 McCormick Bank Building, Salt Lake City, Utah."

Yours truly,
Utah State Farm Bureau.

By James M. Kirkham,
Secretary.

Utah Wool Growers Association
By Willard Hansen, Jr., Secretary.

GOOD YIELD OF EARLY LAMBS IN SOUTHERN UTAH

The range in this section is in better condition than for a very long time. Everything is plentiful but money. Hay is selling around \$10 to \$12 per ton, and oats 2½ cents a pound.

We bred some of our ewes before we went to the ram sale last fall and have just finished lambing them. We had very good luck, as we docked 120 lambs from 96 ewes. This is the best time to lamb if you have a warm place. We breed our ewes at night and take the rams out in the daytime and feed them. Our lambs are stronger and better by this manner of breeding. About 90 per cent of the lambs are dropped in the daytime. Some people do not think there is anything in this, but we have bred this way for four years and have had good luck. We have had some ewes suffering with caked udder or starting with blue bag. The best thing that I have found is mustang liniment. I have cured some after they were quite lame. About two good rubbings does the work.

I am sending some names of probable subscribers, to whom you might mail sample copies of the Wool Grower.

Parowan, Utah. W. W. Pendleton.

NORTHERN NEW MEXICO

Sheep conditions are in bad shape as in all other sections. Most of the growers have their wool on hand yet, either stored here or in storage in Boston. Have had an elegant winter in northern New Mexico and sheep are in good condition, with prospects of early grass and a good lambing. It is dry now and rains or snow are needed. Homesteaders are fast taking all the land and the days of free range is about over here.

No breeding ewes are selling and most owners are hard pushed to finance themselves, but are thankful for the easy winter and seem determined to hold on for better times.

Grantham Bros.

Tres Piedras, New Mexico.

EASTERN OREGON REDUCES OVERHEAD EXPENSE.

A recent report of the Oregon State Live Stock Sanitary Board says:

A trip through eastern Oregon shows that the winter just ended has been the most favorable in many years for livestock. The overhead which was so ruinous a year ago, has been cut practically to one-fourth the costs of the winter of 1919-20. Cheap feed and mild weather have been in part responsible for this. Material reduction has taken place in labor costs. Ranch employees have been cut from \$85 a month to something like \$50. Sheep herders are now working for from \$60 to \$75 a month, which represents a cut of 40 per cent. Sheep shearers are asking 12½ cents largely because this price was established by the Utah Sheep Shearers' Union, who voluntarily cut from 17½ cents to 12½. The growers are talking ten cents and will have no trouble in filling the jobs at this price.

The heavy fall rains produced a luxuriant growth of grass and all stock taken up in the fall were in prime condition. This was responsible for an early maturing of all feed lot stuff. Practically everything got fat this year. As a result there has been an early marketing of pen fed animals and a fine growth of wool and a bumper lamb, calf and colt crop will be insured.

Eastern Oregon stock growers are determined to pull through the present period of depression. Bankers state that there has been enough money saved during the past six months to recoup much of the loss that has been sustained because of growers' not selling at top prices. Stockmen realize that the only way in the long run that one can lose in the stock game is to lose the stock. This year there has been no disease loss, neither has there been a storm loss, nor has there been any considerable amount of loss from forced liquidation. If there ever have been losses in the stock industry, either the stockman or the banker have been at fault, the stockman, perhaps, because he has given up, the banker because he has lost faith. Any stockman that has stood off failure until now is surely through the worst of it. The banker who has helped him is now well able to see the fruits of his good judgment.

Federal reports show that there are ten million fewer domestic animals in the United States than a year ago. Breeding stock is sure to be in much demand.

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April, 1921

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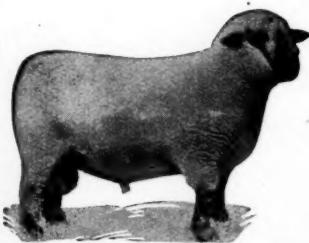
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Write Comfort A. Tyler, Secretary,
14 Woodland Ave., Detroit, Mich.

OUR 1920 MEAT BUSINESS**Production, Imports, Exports,
Consumption**

The Bureau of Animal Industry has just published its annual summary of meat production and consumption of meat as compiled by Mr. John Roberts.

The average American's meat diet in 1920 totalled 142.1 pounds. This is two pounds less than in 1919 and 10 pounds less than in 1918. The average consumption per person during the past five years has been 143.3 per annum and from 1911 to 1915 it was 148.5 pounds.

The production of meat reached its highest point in 1918, amounting to 12,000,000,000 pounds. The per capita consumption for that year was the highest since 1912 and the exports were the highest on record.

The 1920 production was lower than in 1918 or 1919 but higher than in any earlier year. The increased production of late years has been met by the consumption of an increasing population and by exports. The 1920 exports, however, were one-half of what they were in the two previous years but still above those of any of the seven years prior to the war.

The production, exports, imports, and per capita consumption of each class of meat for 1914 and later years is as follows:

	1914 Total Meats Production	1917 Pounds	1918 Pounds	1919 Pounds	1920 Pounds
Exports	475,000,000	1,322,000,000	2,454,000,000	2,215,000,000	1,093,000,000
Imports	323,000,000	44,000,000	210,000,000	62,000,000	160,000,000
Per capita consumption	140.9	131.8	152.5	144.5	142.1
BEEF:					
Production	2,038,000,000	1,517,000,000	1,756,000,000	1,578,000,000	1,660,000,000
Exports	95,000,000	376,000,000	728,000,000	314,000,000	164,000,000
Imports	265,000,000	29,000,000	112,000,000	43,000,000	53,000,000
Per capita consumption	58.9	62.0	67.8	60.0	56.4
PORK: (Lard excluded)					
Production	7,228,000,000	6,801,000,000	9,137,000,000	9,269,000,000	8,470,000,000
Exports	377,000,000	943,000,000	1,724,000,000	1,897,000,000	925,000,000
Imports	38,000,000	10,000,000	97,000,000	11,000,000	6,000,000
Per capita consumption	69.9	58.4	72.5	70.3	71.0
MUTTON & LAMB:					
Production	720,000,000	473,000,000	522,000,000	626,000,000	556,000,000
Exports	4,000,000	3,000,000	2,000,000	3,000,000	4,000,000
Imports	20,000,000	6,000,000	1,000,000	8,000,000	101,000,000
Per capita consumption	7.5	4.7	5.0	6.0	6.1
VEAL:					
Production	275,000,000	336,000,000	403,000,000	478,000,000	527,000,000
Imports and Exports:—None.					
Per capita consumption	4.4	6.5	7.0	8.1	8.5